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ABSTRACT

This document contains recommendations from the Minnesota Higher Education Coordinating Commission to the State Legislature concerning postsecondary education needs in the 1970's. The recommendations pertain to: (1) the assessment of progress and needs in the state; (2) making postsecondary education available to all sectors of Minnesota; (3) the expansion of public postsecondary facilities; (4) facilitating greater utilization of private colleges in meeting Minnesota's postsecondary needs; (5) the achievement of greater effectiveness through cooperation with neighboring states; (6) the clarification of the roles of postsecondary institutions and systems; (7) meeting the continuing education and community services needs of Minnesota; (8) sharing the costs and improving the budgeting of higher education institutions; and (9) the cooperative planning, coordinating, and utilizing of instructional resources and programs. (HS)

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MINNESOTA HIGHER EDUCATION COORDINATING COMMISSION

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REPORT TO THE
1971 MINNESOTA LEGISLATURE

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MEETING THE CHALLENGE

Recommendations for State Action in Meeting Minnesota's Needs for Post-Secondary Education

COMPREHENSIVE PLAN—PHASE II
MINNESOTA HIGHER EDUCATION
COORDINATING COMMISSION

Suite 400 Capitol Square
550 Cedar Street
St. Paul, Minnesota 55101

January 1971

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PREFACE

Meeting the Challenge is concerned with needs to be met, problems to be resolved, and actions to be taken during the decade of the 1970's. It is the second major report based on continuous comprehensive planning for Minnesota post-secondary education, undertaken by the Higher Education Coordinating Commission. This report builds on the assessments and recommendations presented in the Commission's first major report, *Proposal for Progress,* which was presented to the 1969 Minnesota State Legislature.

No effort has been made to restate all of the assessments and recommendations which were presented in *Proposal for Progress*. This report does not contain a complete and final solution to every problem which must receive attention during the 1970's. In keeping with the nature of continuous planning, additional recommendations will be presented in future reports.

This report contains some far-reaching recommendations, adoption of which will require recognition of new needs and changing conditions. Some of the recommendations will be controversial, but all of them deserve serious consideration by the 1971 Legislature.

The recommendations presented in this report are the product of the joint thinking of members of the Commission. These recommendations reflect the many hours of deliberation in which the Commission engaged each month since the end of the last legislative session.

In order to provide the 1971 Legislature with sound recommendations worthy of implementation, the Commission studied post-secondary education needs and problems thoroughly. A massive amount of relevant information was generated by the Commission's research program. Additional information and the opinions of concerned citizens were obtained through public hearings. Reports and presentations of the several post-secondary systems were considered. Expert advice was sought from several consultants. The process of reaching agreement on complex issues was long and arduous.

The Commission's priorities for the past two years were established by the 1969 Legislature, which requested study concerning possible establishment of a state junior college in St. Paul, the possible establishment of an upper-division state college, the relationship of area vocational-technical schools to other institutions of higher education, alternative means for meeting post-secondary education needs, and cooperative planning of curriculum. The Commission's assessments and recommendations on these and several other matters are summarized in this report. More complete information is presented in other Commission reports and publications, a listing of which appears in Appendix A.

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SUMMARY OF RECOMMENDATIONS

Since *Meeting the Challenge* is itself a summary report, no attempt has been made to summarize its contents. Any reader interested in the future of Minnesota post-secondary education is urged to begin with the main body of the report which has been intentionally kept brief. More detailed information is presented in the several appendices and other Commission reports to which references are made in this report. A summary of recommendations is presented below for the convenience of the reader who wishes to refer to a brief listing of recommendations without reference to the context of the recommendations.

I. In order to encourage Minnesota's most able young people to pursue post-secondary education, to make post-secondary education economically available to Minnesota residents, to extend the benefits of post-secondary education to students from all socio-economic segments of the population and to provide the opportunity for Minnesota residents to select the post-secondary institution of their choice, the Commission recommends that the 1971 Legislature expand the State Scholarship and Grant-in-Aid programs by appropriating $3,820,850 for these programs for Fiscal Year 1972 and $7,496,850 for Fiscal Year 1973.

II. The Commission recommends that the 1971 Legislature pass legislation providing statutory authorization for the State Grant-in-Aid program in order to assure continuity in the availability of grants for needy Minnesota residents.

III. The Commission recommends that students attending vocational schools be made eligible for State Scholarships to assure that all types of post-secondary education are financially available to Minnesota residents.

IV. So that the amount of scholarship and grant awards may be brought more nearly in line with current post-secondary costs, the Commission recommends that the monetary limitation on the range of awards of $200 to $800 be changed to $100 to $1,000.

V. In order that students with all levels of need will be treated more equitably, the Commission recommends that the functional limitation on the amount of scholarships and grants be changed from the cost of tuition and fees plus $100 for books and supplies to one half of the applicant's demonstrated need.

VI. In order to make transfer from a junior college to a four-year institution economically feasible for all Minnesota residents, the Commission recommends that junior college students not previously awarded a State Grant-in-Aid be made eligible to apply for a Grant-in-Aid at the time of transfer to an approved four-year institution of higher education.

VII. The Commission recommends that the capacity of elementary and secondary schools to educate disadvantaged students be strengthened substantially in order that the educational deficiencies of disadvantaged students may be overcome earlier.

VIII. In order to facilitate more effective cooperative efforts of all post-secondary education institutions in serving the largest concentrations of Minnesota's disadvantaged population and to provide a better link between this population and post-secondary education, the Commission recommends that the 1971 Legislature establish an experimental cooperative education center in the Twin Cities.

IX. The Commission recommends that the 1971 Legislature provide the funds necessary for Minnesota's public institutions of higher education to meet the needs of individual students, both advantaged and disadvantaged, through effective counseling services.

X. The Commission recommends that the 1971 Legislature stimulate and facilitate the development of appropriate programs in institutions meeting the needs of disadvantaged students by establishing an educational opportunity fund to support such ventures.

XI. In order that the state's needs for post-secondary education may be met as efficiently as feasible, the Commission recommends that the 1971 Legislature take necessary steps to assure that appropriate expansion, both through increasing the capabilities of existing public institutions to accommodate more students and through establishing new public institutions can be completed before 1978.

XII. The 1971 Legislature should provide sufficient building funds for rapid development of new institutions already authorized and recommended as well as for necessary improvement of physical facilities on existing campuses. The pattern of enrollment growth projected for the next two decades indicates that delaying construction of needed facilities on both new and old campuses would not be in the best interests of the state.

XIII. The Commission urges the establishment of a state junior college in St. Paul. The Commission recommends that the 1971 Legislature appropriate funds to the State Junior College Board adequate for the planning and establishment of this institution as soon as possible. The absence of a comprehensive two-year commuter institution in a city with a population of 300,000 represents a serious deficiency in the state's admirable efforts to make post-secondary opportunities as geographically accessible as practical for all Minnesota residents. Moreover, as the University of Minnesota continues to shift relative emphasis from lower division to upper division and post-baccalaureate programs, the need for additional lower-division opportunities in the Twin Cities will become critical.

XIV. A state college designed to accommodate approximately 5,000 upper division students and 3,000 lower division students by 1980 should be established in the Twin Cities metropolitan area. While the concept of a free-standing upper division institution is appealing, the experience of such institutions would suggest that a college which emphasizes upper-division programs is a more realistic approach. Such a state college would increase the diversity of opportunities available to metropolitan area residents on a commuting basis. It would also provide the opportunity for developing new programs and other innovations in curriculum. The 1971 Legislature should provide funds to the State College Board for developing specific plans for a Twin Cities state college in order that a final decision by the 1973 Legislature on establishment of the institution may be based on a more complete assessment of the nature of the proposed institution, its curriculum, the students it would strive to serve, the investment necessary for developing an appropriate campus, and the way in which its role would relate to existing institutions. The Higher Education Coordinating Commission should be involved in the development of these plans, and it should make recommendations on implementation of these plans to the legislature in 1973.

XV. The Rochester community offers an unusually fine setting for a university and residents of the area have expressed a strong feeling of need for advanced educational offerings to be provided in the community. Although the 1969 Legislature did not request that the Commission consider a university campus in Rochester, considerable attention has been focused on the desirability of such an institution since the last legislative session. The Commission continues to believe that development of undergraduate medical education by The Mayo Clinic and Foundation in Rochester is in the best interests of the state and should be accomplished as soon as feasible with state support. A University of Minnesota campus in Rochester would provide strong support for undergraduate programs in medicine in Rochester. Development of a complete description of the nature, purpose, programs, and costs of a University of Minnesota branch in Rochester should precede a final decision on establishing such an institution. Some pertinent questions regarding the proposed institution, such as its impact on Winona State College, Rochester State Junior College, and other institutions in the area, cannot be fully considered in the absence of a more complete description of the proposed institution. Accordingly, the Commission recommends that the 1971 Legislature appropriate planning funds to the University of Minnesota in order that a decision by the 1973 Legislature may be based on more adquate information. If detailed study confirms present indications of need, a branch of the University of Minnesota should be established in Rochester. The Higher Education Coordinating Commission should be involved in the development of these plans, and it should make recommendations on implementation of these plans to the legislature in 1973.

XVI. In order to facilitate desirable improvements in private colleges physical plants, the Commission recommends that the 1971 Legislature establish a state higher education facilities agency which is authorized to issue bonds for the construction of physical facilities on private college campuses to be used by private colleges on a lease basis until all principal and interest has been paid with rental income at which time ownership of the facility is transferred to the private college.

XVII. In order to provide post-secondary education for Minnesota residents at the lowest feasible cost to the taxpayer, the Commission recommends that the 1971 Legislature authorize the Higher Education Coordinating Commission to contract with approved private colleges and universities for providing an acceptable program of collegiate education for Minnesota residents. Such contractual arrangements should provide for payment from the State Treasury to each private college providing the service prescribed by the contract of an amount not to exceed $500 per student in each institution which grants a bachelor's degree and $400 per student in each institution which grants an associate degree, but not a bachelor's degree, for each Minnesota resident enrolled as a full time student in excess of the number of Minnesota residents enrolled as full time students in each private college in the fall of 1970 and, in addition, an equal amount per student ($500 for senior colleges and $400 for junior colleges) for every student who receives a state grant under the Minnesota State Grant-in-Aid program and is enrolled in each private college as a full time student without regard to the number of students previously enrolled.

XVIII. The Commission recommends that the policy of seeking to improve the availability and accessibility of post-secondary education opportunities to Minnesota residents through reciprocity agreements with neighboring states be continued and extended to include area vocational-technical schools.

XIX. The Commission recommends that the kind of interstate cooperative efforts which have been undertaken by Moorhead State College, North Dakota State University, and Concordia College be given strong encouragement by the 1971 Legislature.

XX. Occupational programs should continue to be offered by all types of post-secondary institutions. Area vocational-technical schools should continue to offer a wide range of programs of two years or less which provide for initial occupational entry and retraining for advancement and occupational adjustment. State junior colleges located in areas which are not served by area vocational-technical schools should offer the range of occupational programs which would be provided by an area vocational-technical school if one were located in the area. State junior colleges located in areas which are served by an area vocational-technical school should offer a more limited range of occupational programs, depending on the population and needs of the area with emphasis on programs of two years in duration and those which are most closely related to the academic programs of the institution. Public four year institutions should offer occupational programs of more than two years in duration. Four-year institutions which are located in areas served by area vocational-technical schools, but not by state junior colleges, also should offer some occupational programs of two years or less with emphasis on two year programs which are closely related to their academic programs in order to meet the commuter needs of the area. Four-year institutions also may appropriately offer a limited number of terminal occupational programs of two years or less for experimental or laboratory purposes or to meet the needs of students for whom completion of a four year program is determined not to be an appropriate goal.

XXI. Proposals for establishing new public post-secondary institutions of all types should be reviewed by the Higher Education Coordinating Commission which should recommend legislative authorization for all proposed institutions receiving favorable review by the Commission.

XXII. Expanded cooperation between higher education institutions and area vocational-technical schools which are located in the same or neighboring communities should continue to be encouraged. Economic incentives should be provided for those institutions which seek to adopt cooperative programs and which seek to add programs which are judged to insure that educational opportunity is made fully accessible to as many Minnesota residents as practical.

XXIII. To insure the most effective use of state resources, the program review function of the Commission should be strengthened and should continue to include considerations of new and existing vocational and occupational education programs along with all other post-secondary programs. The Commission should continue to study the needs of students and develop information on manpower demands both in the state and nation. Through the Commission, the state of Minnesota should not only discourage unwarranted proliferation of occupational programs, but should also generate information to identify programs required to meet current and emerging needs in vocational and occupational areas.

XXIV. The Commission should review and make recommendations to the state board for vocational education on the annual *Minnesota State Plan for Vocational-Technical Education,* as it relates to post-secondary education. All institutions which conduct vocational-technical programs should follow, to the largest extent possible, a policy of qualifying for reimbursement from federal and state funds administered by the State Board for Vocational Education.

XXV. Legislation should be enacted providing authorization for any area vocational-technical school to become a state institution under the State Junior College Board upon petition by the local school board to the Minnesota Junior College Board which will review the request and make recommendations to the Minnesota Higher Education Coordinating Commission, which will take final action on the request after consultation with the State Board for Vocational Education and will report such action to the legislature.

XXVI. Legislation should request the State Junior College Board, the State Board for Vocational Education and the local school boards in those communities beyond the seven county metropolitan area, where both an area vocational-technical school and a state junior college exist, to explore, identify and develop a plan to combine the two institutions in such communities. This cooperative plan should be reported, along with implications and problems evident in its implementation, to the Minnesota Higher Education Coordinating Commission by July 1, 1972, in time for its consideration as part of the Commission's recommendations to the 1973 Legislature.

XXVII. In order to provide for progress in meeting the state's emerging needs for continuing education and community service activities, the Commission recommends that the 1971 Legislature (1) provide funds for credit bearing continuing education programs at levels commensurate with funding for regular academic programs, thereby eliminating any cost differential of day and evening school classes to the student, (2) provide more adequate funds for personnel to develop and administer noncredit continuing education programs, the need in each instance to be determined by the individual systems, and (3) appropriate $500,000 ($200,000 as matching funds and $300,000 for state grants to institutions) for Fiscal Year 1972 and $700,000 ($200,000 as matching funds and $500,000 for state grants to institutions) for Fiscal Year 1973 to be used as matching funds for programs receiving federal assistance under Title I of P. L. 89-329 and for state grants to collegiate institutions for support of community service programs.

XXVIII. In order that costs may be shared appropriately between the student and the state, the Commission recommends that the policy of the state on tuition rates in state collegiate institutions be to expect that income from tuition provide approximately 30 per cent of instructional costs as represented by direct and indirect expenditures for instruction and departmental research.

XXIX. In order to facilitate a more effective budgeting process for the 1971-73 Biennium, the Commission recommends that system requests for operating budgets and appropriations for the 1971-73 Biennium be made in accordance with the common definitions and concepts presented in Section 9 of this report.

XXX. Regional Production Centers: To continue to place production facilities in close proximity to educational resources and faculties, six additional production centers are to be established. The production centers serve the intra-institutional needs of the resident institution, and those of the junior and private colleges, as well as to provide facilities for inter-institutional production. These centers are available to the elementary and secondary schools to the extent that the capability of the facilities permit.

XXXI. Inter-institutional Development Project: To encourage the development of television materials on an inter-institutional basis, funds should be provided for the programming of such materials for broadcast and closed-circuit distribution. This project administered through the Higher Education Coordinating Commission will continue to make grants to institutions submitting proposals for the cooperative development of television courses, related instruction and materials. The proposals would cover the institutions' additional costs for personnel and materials.

XXXII. Television Coordinator: To work with institutions in acquainting faculty and administrators with the capabilities of television instruction and the procedures by which it can be used, a television coordinator should be provided at the state level. The person in this position needs to communicate what other institutions within the state and nationwide are doing in various aspects of television instruction. This person would need to encourage balanced development of television capability within the state and develop ways by which faculty members from various institutions can join in efforts to improve instruction via the use of television.

XXXIII. Continuing Program of Research: To maintain an on-going evaluation of inter-institutional television and to provide new information relative to improving instructional effectiveness.

XXXIV. Model Interconnection System: To provide needed experience in the exchange of communications signals among several institutions of post-secondary education, a pilot project system should be provided. This system could accommodate television and other educational communications activities between the University of Minnesota, Minneapolis, University of Minnesota, Morris, Southwest Minnesota State College, and Willmar State Junior College, and a similar connection between Mankato and Southwest State Colleges.

XXXV. All institutions and systems of higher education, prior to the development of their legislative requests, shall identify to the Higher Education Coordinating Commission their plans for computing for both facilities and for operating costs. These plans should provide detailed information on budgeted costs and program justification. The Commission shall review these proposals to determine how these plans are coordinated with the Master Plan—how they approximate the goals and where they deviate from them. The Commission shall prepare a Summary Report for each legislature on the progress that has been made towards achieving the goals of the Master Plan. This Summary Report shall also include recommendations regarding the requests which are being submitted by the institutions and systems, and by the Commission itself.

XXXVI. For on-going, or operational, computing activities, the responsibility for planning and for preparing legislative requests shall rest with the individual systems of higher education. Funding will be appropriated to the individual systems.

XXXVII. The—*Computers and Information Systems in Higher Education*—report identifies four programmatic areas of a developmental nature.

These are:

(a) a development center for Computer-Assisted and Computer-Managed Instruction.

(b) a statewide automated library system.

(c) within each biennium, a program of grants for projects in research and in development related to computing in higher education. (a continuation of an existing program)

(d) grants to private colleges in support of their computing activities. For these four developmental activities, the responsibility for planning shall rest with the Commission. For a grants-program (c and d above) the Commission will also prepare the legislative requests and receive the appropriations. For activities which involve both new facilities and operating support (a and b above), the legislative requests will be prepared jointly by the Commission and those individual systems which plan to make use of the facilities. Appropriations for the initial facilities will be made to the Commission; appropriations for operating costs associated with the developmental activities themselves will be made to the appropriate system or agency, including the Commission itself. The Commission shall assign management responsibility for the facility to another board or agency. Adjustments in implementing plans presented to the legislature in accordance with procedures outlined above shall be subject to review by the Commission.

XXXVIII. The Commission proposes to review periodically the effectiveness of the policies being adopted here and to make or recommend such changes as it deems advisable.

XXXIX. In order that it may be established as a continuing function of the Commission with support of the Legislature the Commission recommends that the 1971 Legislature give appropriate statutory recognition to the Commission's responsibility for program review.

I. ASSESSING PROGRESS AND NEEDS

The combined efforts of Minnesota residents, the 1969 Legislature, officers of post-secondary institutions, and Minnesota students provided for improved effectiveness of Minnesota's post-secondary education during the past two years. While such effectiveness can serve as the basis for continuing progress, meeting Minnesota's post-secondary education needs during the decade of the 1970's will require increased effort and new approaches to emerging problems and needs.

Any assessment of the progress of Minnesota post-secondary education during the past two years would be inadequate without due recognition of the fact that no major disruptions or serious confrontations occurred on the campuses of Minnesota institutions. Such a record of achievement during a period of great turmoil on college campuses nationally is a highly favorable reflection of the quality of both students and administrative officers in Minnesota post-secondary education.

Enrollment projections which the Commission submitted to the 1969 Legislature for the fall of 1969 and the fall of 1970 have been highly accurate. Total head count enrollment of 153,635 exceeded the Commission's projected enrollment in the fall of 1969 by less than one half of one per cent, and the 1970 fall enrollment of 161,629 surpassed the Commission's projection by only 1.1 per cent.

The fact that enrollment projections were achieved and substantially greater numbers of students were accommodated indicates desirable progress in extending the benefits of post-secondary education to an increasingly larger proportion of the state's population. This fact also suggests that achieving increasingly higher rates of post-secondary attendance which the Commission has projected through the 1990's is realistic, provided that the state dedicates sufficient resources to meeting the educational needs of its residents.

Significant progress was represented by action of the 1969 Legislature authorizing two new state junior colleges, a state program of grants-in-aid to financially needy students and providing substantial increases in appropriations for higher education. Minnesota's 36.5 per cent increase in state tax dollars devoted to current expenses of higher education from Fiscal Year 1969 to Fiscal Year 1971 is slightly below the 38.5 per cent average increase for all 50 states. However, comparison with eight states in the Midwest (seven Big Ten states plus North Dakota and South Dakota) reveals that Minnesota ranks third among these nine states in percentage gain in state appropriations for higher education from Fiscal Year 1969 to Fiscal Year 1971. See Table I.

TABLE I

PERCENTAGE INCREASE IN APPROPRIATION OF STATE TAX DOLLARS FOR CURRENT HIGHER EDUCATION EXPENSES, FISCAL YEAR 1969 TO 1971

	Percentage Increase	Nine-State Ranking
Illinois	46.5	2
Iowa	18.5	7
Indiana	20.3	6
Michigan	31.0	4
MINNESOTA	36.5	3
North Dakota	17.0	8
Ohio	50.0	1
South Dakota	24.0	5
Wisconsin	16.3	9
National Average	38.5	

With a per capita appropriation for current higher education expenses of $38.07 for Fiscal Year 1971, Minnesota exceeds the national average ($34.98). Minnesota and North Dakota share a ranking of fourth among the nine Midwest states and seventeenth among all 50 states in per capita tax dollars devoted to current higher education expenses in the present fiscal year. See Table II.

TABLE II

PER CAPITA APPROPRIATION OF STATE TAX DOLLARS FOR CURRENT HIGHER EDUCATION EXPENSES, FISCAL YEAR 1971

	Per Capita Appropriation	Nine-State Ranking	Fifty-State Ranking
Illinois	$43.52	1	9
Iowa	36.42	6	21
Indiana	33.83	7	27
Michigan	39.16	3	16
MINNESOTA	38.07	4	17
North Dakota	38.07	4	17
Ohio	24.73	9	46
South Dakota	32.06	8	34
Wisconsin	41.27	2	15
National Average	34.98		

Nationally, Minnesota continues to rank below the median on appropriation of state tax dollars per student in public colleges and universities. However, Minnesota's rise from a ranking of thirty-fourth among the 50 states in Fiscal Year 1968 to a current ranking of thirtieth represents highly desirable progress in making resources for Minnesota higher education more commensurate with the job to be done.

The fact that Minnesota exceeds the national average on per capita appropriations of tax funds for higher education, but ranks below the median of the 50 states on per student appropriations for higher education is the result of several factors. Among these are: (1) a relatively high percentage of Minnesota residents enter post-secondary education, (2) the number of students from other states who attend colleges and universities in Minnesota is greater than the number of Minnesota residents who attend colleges and universities in other states, and (3) a relatively higher percentage of enrollments in Minnesota higher education is accommodated in public institutions as the proportion of students attending private colleges in Minnesota continues to decline.

Meeting Minnesota's post-secondary education needs during the decade of the 1970's will be a challenging endeavor. Not only will many existing programs and efforts require strengthening and modification, but significant new efforts and approaches to meeting needs must also be implemented. Not only will the state's investment in the education of its citizens have to be increased substantially in order to meet increasing needs, but policies which reflect needs and conditions of the 1960's will also have to be changed to reflect emerging needs and changing conditions.

Meaningful response to the needs and conditions of the 1970's will require positive actions aimed at (1) making post-secondary education financially available to Minnesota residents, (2) extending the benefits of post-secondary education to Minnesota's disadvantaged population, (3) expanding the capacity of public post-secondary education, (4) facilitating greater utilization of private colleges in meeting Minnesota's post-secondary education needs, (5) achieving greater effectiveness through cooperation with neighboring states, (6) clarifying the roles of post-secondary institutions and systems, (7) meeting the continuing education and community service needs of Minnesota, (8) sharing the costs of higher education, (9) improving the budget process, (10) planning and utilizing instructional resources cooperatively, and (11) coordinating and planning instructional programs cooperatively. Positive recommendations for achieving each of these objectives are presented in the following sections of this report.

II. MAKING POST-SECONDARY EDUCATION FINANCIALLY AVAILABLE TO MINNESOTA RESIDENTS

In its report to the 1969 Legislature, the Higher Education Coordinating Commission reported its assessment that achieving nearly universal post-secondary education for Minnesota residents is an urgent matter.

> All relevant projections indicate that each new decade will bring a society which is more technologically advanced and more socially and economically complex. Studies of manpower needs and employment opportunities for both the state and the nation indicate that (1) the occupational groups which will provide the most opportunities for employment in the future—professional and technical workers, clerical workers, and service workers—are among those which require persons with advanced education; (2) the need for personnel in occupational groups which previously provided opportunities for persons without post-secondary education—laborers and farm workers—will continue to decline at a significant rate; (3) young people are comprising an increasingly larger proportion of the unemployed population; and (4) there is a positive relationship between advanced education and both annual and lifetime income. Clearly, the economic advancement, as well as the cultural and social progress, of both the individual and the state will depend upon the education of the state's citizens beyond high school.[1]

The Commission reaffirms its conviction that the state must pursue the policy of fostering universal post-secondary education. The Commission also reaffirms its position that every high school graduate who has reasonable capacity to profit from further education should be actively encouraged to enter an appropriate program of post-secondary education and every effort should be made to remove barriers to post-secondary education.

The impressive growth in the percentage of Minnesota residents receiving post-secondary education during the last decade reflects the strong commitment of the state to make opportunities for post-secondary education adequately available, and Minnesotans can take pride in the fact that about 70 per cent of the state's high school graduates now enter some kind of post-secondary education program. However, it is significant to note that the increases in the percentage of Minnesota residents receiving post-secondary education during the decade of the 1960's coincided with [illegible] increases in Federal student financial aids.

Recent experience suggests that the kind of increases in Federal student financial aid necessary for continuing increases in the percentage of Minnesota's residents who pursue education beyond high school will not be forthcoming. To the contrary, the amount of Federal funds available for scholarships and grants to Minnesota residents has been sharply reduced.

While Federal funds for student financial aid have declined, the cost of attending post-secondary education institutions has increased rapidly. The average cost of attending a college or university in Minnesota has increased 20 per cent in the two years between the 1968-1969 academic year and the current 1970-1971 academic year.

The ability to bear the expenses of post-secondary education varies widely among Minnesota residents. A few enjoy a financial status which permits them to meet the costs with ease. Others can bear the necessary expenses by sacrificing and lowering their standard of living. Many must incur large debts in order to pursue post-secondary education.[2] The financial situation of some is such as to prevent their assuming the cost of entering a post-secondary education program even through borrowing.

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[1] Minnesota Higher Education Coordinating Commission, *Proposal for Progress: Guidelines for State Policy and Comprehensive Planning of Post-Secondary Education*, p. 5.

[2] Minnesota residents obtained loans for post-secondary education totaling $25,102,486 under the Federally Insured Student Loan Program during 1969. The amount borrowed by students and their families from other sources is unknown.

Appropriations for state scholarships by the 1967 Legislature and for state grants-in-aid by the 1969 Legislature were important first steps in making post-secondary education financially available to Minnesota residents. However, the amounts of these appropriations were not large enough to meet the emerging need. Combined appropriations for state scholarships and grants in Fiscal Year 1971 were sufficient to provide assistance to less than three per cent of 1970 graduates of Minnesota high schools.

With the cost of pursuing post-secondary education rising at average rates of 10 to 17 per cent each year, lack of sufficient funds to meet the costs will become a barrier to increasingly larger numbers of Minnesota residents. Meeting the costs of post-secondary education already has become a serious problem for middle income families, particularly those with more than one off-spring of college age.

Making post-secondary education financially available to Minnesota residents will require substantially larger appropriations for both state scholarships and state grants-in-aid. Experience with the two programs suggests that some modification in legislative authorization is also needed. Accordingly, the Commission makes the following recommendations:

> *The Commission recommends that the 1971 Legislature make a meaningful effort toward the goal of assuring that post-secondary education is financially available to all Minnesota residents by appropriating $3,820,850 for the State Scholarship and State Grants-in-aid Programs for Fiscal Year 1972 and $7,496,850 for Fiscal Year 1973.*

Through careful analysis of data on the distribution of Minnesota families by income levels and the costs of attending post-secondary institutions in Minnesota, the Commission has projected the demonstrated need for financial aid of Minnesota high school graduates seeking entrance to post-secondary education in the 1971-72 and 1972-73 academic years to be $24,000,000 per year. The basis for this projection is presented in Appendix B.

The Commission believes that the state ought to be providing sufficient funds to meet at least one-third of the demonstrated need for financial assistance of the members of each of the state's high school graduating class who seek entrance to post-secondary education. The Commission recognizes that appropriations large enough to provide $6,000,000 per year in new scholarships and grants plus necessary funds for renewal awards is not a realistic expectation for the next biennium The Commission believes that appropriations sufficient to meet one-twelfth of the need, or $2,000,000 for new awards for the 1971-1972 academic year and one-sixth of the need, or $4,000,000 for 1972-1973, are realistic.

The Commission proposes that the appropriation for new awards should be divided equally between the State Scholarship Program and the State Grant-in-aid Program. Distribution of the proposed appropriation is presented in Table III.

TABLE III

DISTRIBUTION OF PROPOSED APPROPRIATION FOR STATE SCHOLARSHIPS AND GRANTS, FISCAL YEARS 1972 AND 1973

	Fiscal Year 1972			Fiscal Year 1973		
	New Awards	Renewal Awards	Total Awards	New Awards	Renewal Awards	Total Awards
Scholarships	$1,000,000	$1,082,350	$2,082,350	$2,000,000	$1,758,350	$3,758,350
Grants-in-Aid	1,000,000	738,500	1,738,500	2,000,000	1,738,500	3,738,500
Totals	2,000,000	1,820,850	3,820,850	4,000,000	3,496,850	7,496,850

Information on the number of students projected to receive financial assistance under the State Scholarship and Grant-in-aid programs with the appropriations proposed above for Fiscal Years 1972 and 1973 and comparable information for previous years appears in Table IV. Appendix C contains more complete information on the number of students receiving State Scholarships and Grants-in-aid in previous years, including the number attending each type of institution and the average amount of stipend awarded to students in each type of institution.

TABLE IV

ACTUAL AND PROJECTED TOTAL MINNESOTA POST-SECONDARY HEADCOUNT ENROLLMENTS AND NUMBER AND PER CENT OF STUDENTS RECEIVING STATE SCHOLARSHIPS AND GRANTS-IN-AID, 1968-69 THROUGH 1972-73

Year	Total Enrollment	State Aid* Recipients	Per Cent of Students Receiving State Aid
1968-69	144,244	417	.3
1969-70	153,635	1,263	.8
1970-71	161,629	2,411	1.5
1971-72	167,300	5,164	3.0
1972-73	174,700	10,179	5.8

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*Includes students receiving both initial and renewal awards under both State Scholarship program and State Grant-in-aid program for 1970-71 and subsequent years; scholarship renewals begin in 1969-70, initial grants begin in 1969-70, and grant renewals begin in 1970-71.

The Commission recommends that the 1971 Legislature pass legislation providing statutory authorization for the State Grant-in-aid Program in order to assure continuity in the availability of grants for needy Minnesota residents.

Although the 1969 Legislature passed legislation establishing the State Grant-in-aid Program, passage of the bill on the last day of the legislative session by the Senate was not held to be constitutional. In accordance with an opinion issued by the Attorney General, the Commission made awards from the funds appropriated for grants-in-aid by the 1969 Legislature. A statute authorizing the State Grant-in-aid Program will provide desirable continuity for the program and eliminate uncertainties regarding legislative intent.

The Commission recommends that students attending vocational schools be made eligible for State Scholarships to assure that all types of post-secondary education are financially available to Minnesota residents.

Although students wishing to attend public area vocational-technical schools and approved private vocational schools are eligible to receive State Grants-in-aid, such students are not eligible for State Scholarships. Since there is no acceptable reason for excluding them, those Minnesota residents who choose to enter a post-secondary vocational school should be made eligible to compete for State Scholarships as well as State Grants-in-aid.

So that the amount of scholarship and grant awards may be brought more nearly in line with current post-secondary education costs, the Commission recommends that the monetary limitation on the range of awards of $200 to $800 be changed to $100 to $1,000.

The cost of college attendance has risen rapidly since the 1967 Legislature established the $800 maximum limit on State Scholarships. As indicated above, the average cost per student for Minnesota higher education has risen dramatically since the 1968-69 academic year. The existing limitation on maximum awards is not consistent with the current costs of post-secondary education. Moreover, conditions of rising costs and static maximum limitation have adversely affected the amount of award granted to students attending different types of institutions. More complete information on this matter is presented in Appendix D.

State Scholarship and Grant awards may not exceed the cost of tuition and mandatory fees plus a $100 allowance for books and supplies. Since students under

21 years of age pay no tuition at public area vocational-technical schools, the maximum possible award is $100. Therefore, the minimum limitation of $200 effectively prevents the awarding of both State Scholarships and State Grants-in-aid to students under 21 years of age who choose to attend a public area vocational-technical school. Changing the minimum award limitation to $100 is necessary to permit the granting of awards to students who wish to attend these schools.

In order that students with all levels of need will be treated more equitably, the Commission recommends that the functional limitation on the amount of scholarships and grants be changed from the cost of tuition and fees plus $100 for books and supplies to one-half of the applicant's demonstrated need.

Basing the amount of award to a scholarship or grant-in-aid recipient on the cost of tuition and fees plus $100 for books and supplies (not exceeding the monetary maximum) permits the meeting of the full need of those recipients whose demonstrated need does not exceed the amount of tuition and fees plus $100, but only part of the need may be met for the student with larger demonstrated need. In other words, the scholarship or grant recipient who demonstrates the greatest need will have the smallest proportion of his need met by the state award, and the recipient who demonstrates the least need will have his full need met by the state award. Changing the functional limitation on the amount of scholarship and grant awards to one-half of the recipient's demonstrated need (not exceeding the monetary maximum limitation) will treat students with varying amounts of need more equitably. A more complete discussion of this proposed change and illustrations of the impact of the change are presented in Appendix E.

In order to make transfer from a junior college to a four-year institution economically feasible for all Minnesota residents, the Commission recommends that junior college students not previously awarded a State Grant-in-aid be made eligible to apply for a Grant-in-aid at the time of transfer to an approved four-year institution of higher education.

Although grants-in-aid may be renewed for four years of post-secondary education, a student currently is eligible to apply for a grant only at the time he first enters post-secondary education. The student who will incur relative low costs by commuting to a local junior college initially may not demonstrate sufficient need to qualify for a state grant, and he may not even submit an application. However, when the same student transfers to a four year institution and incurs the expenses of higher tuition and costs of living away from home, he may indeed demonstrate sufficient need for receiving a grant, but finds he is not eligible. In effect, he is penalized for beginning his post-secondary education in a junior college. Making junior college students eligible to apply for State Grants-in-aid at the time of transfer to a four-year institution is consistent with the state policy of maintaining junior colleges throughout the state which offer the first two years of studies leading to a four-year baccalaureate degree.

III. EXTENDING THE BENEFITS OF POST-SECONDARY EDUCATION TO MINNESOTA'S DISADVANTAGED POPULATION

Proposal for Progress, the Commission's report to the 1969 Legislature, emphasized the importance of developing Minnesota's human resources more fully and meeting the educational needs of more individuals by extending the benefits of post-secondary education to a larger proportion of Minnesota's residents. The Commission's enrollment projections were based on the goal of serving an increasingly larger segment of the state's population. Specifically, the Commission recommended that the state work toward the objective of increasing the ratio of post-secondary enrollments to high school graduates in the 18-21 age group from 59.2 per cent in 1968 to 85 per cent by 1985.

Extending post-secondary education to a larger proportion of the population represents a significant challenge, since it requires that the disadvantaged segments of Minnesota's population be reached and served effectively. Although there may be some disagreement over what constitutes the most appropriate, precise definition of disadvantaged, it is sufficient to note that disadvantaged refers generally to youth from families in the lower socio-economic segments of the state's population. The disadvantaged population includes families from all racial and ethnic origins. Though large concentrations of the disadvantaged population are found in the metropolitan area, many disadvantaged families reside in rural Minnesota. As compared with the more advantaged students, disadvantaged students tend to reach post-secondary age with serious learning deficiencies, poor communication skills, physical and emotional health inadequacies, feelings of alienation, and low motivation, as well as a complete lack of funds needed for post-secondary education.

Since the importance of extending post-secondary education to the disadvantaged has been generally recognized only in recent decades in this nation, serious efforts to meet the post-secondary education needs of the disadvantaged population have been recent and sporadic. As a result, we lack continuity and breadth of experience in dealing with the disadvantaged population. Moreover, the prevailing structures and processes of post-secondary education have been developed primarily with reference to the needs and characteristics of the advantaged majority and not the disadvantaged minority. Accordingly, effective service to the disadvantaged will require many adjustments in Minnesota post-secondary education including experimentation and continuing assessment of efforts. Some false starts and mistakes are inevitable.

The fact that extending post-secondary education to Minnesota's disadvantaged population is fraught with difficulties must not deter the state from taking positive steps of the necessary magnitude to bring Minnesota's disadvantaged youth into the mainstream of productive society through post-secondary education. The alternative of perpetuating the disadvantaged and under-developed status of a significant portion of the state's population is no longer an acceptable policy. To a large extent, it is the previous perpetuation of this disadvantaged status which has led to urban blight, larger welfare rolls, rising crime rates, and social conflicts.

In order to obtain a more complete assessment of the characteristics and needs of disadvantaged youth, the Commission adopted a resolution proposing a study of post-secondary education needs of disadvantaged youth in the Twin Cities. The study was focused upon the Twin Cities, because the largest concentration of Minnesota's disadvantaged youth are found there. With assistance from a grant from the United States Office of Education, the study was begun in September of 1969.

Perhaps the most striking observation which can be drawn from the study findings is recognition of the fact that success in providing post-secondary education for disadvantaged youth will require significantly greater inputs, both human and capital investments, than are required for minimal success in educating the more advantaged majority.[3] It is the very fact that youth are disadvantaged which necessitates greater inputs to overcome or compensate for the disadvantages which presently bar them from successfully pursuing post-secondary education.

In general, the study identified four major factors which serve as barriers to post-secondary educational opportunities for the economically disadvantaged. These factors are:

1. The need of many disadvantaged persons for compensatory education, both to improve basic skills and to fill any post-secondary preparation gaps;
2. The need for adequate assessment and counseling services to channel the disadvantaged population into the appropriate post-secondary experience, and to retain the student once enrolled;
3. The need of the disadvantaged for adequate financial support while availing himself of post-secondary opportunities; and
4. The need for appropriate, geographically accessible post-secondary educational programs.

In light of these needs, the Minnesota Higher Education Coordinating Commission submits the following recommendations.

The Commission recommends that the capacity of elementary and secondary schools to educate disadvantaged students be strengthened substantially in order that the educational deficiencies of disadvantaged students may be overcome earlier.

The problems of the disadvantaged are not problems which can be solved entirely at the level of post-secondary education. It is estimated that one-third of the graduates of Minnesota's high schools who come from disadvantaged backgrounds require some compensatory education in basic skills in order to succeed in a post-secondary environment. Clearly, this is a problem which permeates the entire system of education in Minnesota. For this reason, the Commission strongly recommends that the legislature, the State Department of Education and all local school boards take steps to strengthen Minnesota's elementary and secondary education programs, especially in areas of serving major concentrations of its economically disadvantaged population. Special aid distributions may be one solution to the problem of putting funds at this point of greatest need within the state.

Compensatory efforts at the post-secondary level, although clearly necessary for the present generation, do not represent the best long range solution to the problem of education for the disadvantaged. In the long run, the problem should be solved by greater success at much earlier ages. One method for combating the problems of the disadvantaged is to provide adequate counseling services and special resource teachers who can help students overcome learning deficiencies at the levels of elementary and secondary education. On the average, Minnesota's public secondary schools employ one counselor for each 439 students. In order to better serve the needs of all Minnesota residents, the Commission supports efforts to bring the counseling ratio to one counselor for each 600 pupils in public elementary education and one counselor for each 300 pupils in public secondary education. Comparable increases in the kind of special resource teachers suggested above with particular emphasis at the elementary level are essential.

In order to facilitate more effective cooperative efforts of all post-secondary education institutions in serving the largest concentrations of Minnesota's disadvantaged population and to provide a better link between this population and post-secondary education, the Commission recommends that the 1971 Legislature establish an experimental cooperative education center in the Twin Cities.

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[3] Rafael A. Lewy et al, *Meeting the Post-Secondary Educational and Facility Needs of the Urban Disadvantaged in the Twin Cities: Alternative Proposals*, Minnesota Higher Education Coordinating Commission.

As indicated above, a large percentage of students from disadvantaged backgrounds feel alienated and lack the motivation to develop their abilities through post secondary education. Because of their learning and communication deficiencies and previous lack of success in the educational system, they are not naturally attracted to post-secondary education. Furthermore, their view of the world suggests, with partial accuracy, that post-secondary opportunities are not intended for them, but for the more advantaged majority. Moreover, they lack adequate means for assessing their own potential and for identifying and evaluating occupational alternatives for which they might realistically expect to prepare. They also have little opportunity to obtain the assistance necessary to overcome their learning and basic skill deficiencies. In short, post-secondary education is not recognized as part of their world.

Such students cannot be expected to identify and choose among post-secondary education opportunities. Nor can they be expected to take initiative in applying for student financial aid, which is a necessary requisite to their entering post-secondary education. They do not receive the kind of encouragement and moral support from friends and relatives which stimulates middle-class youth to continue their education beyond high school. More frequently, their friends and relatives discourage their giving any consideration to additional education. Consequently, disadvantaged students will not seek post-secondary education. Thus, post-secondary education must seek them.

Many of Minnesota's post-secondary institutions have developed special efforts to identify, counsel, and recruit students from Minnesota's disadvantaged population, but the number of students being reached effectively is too small. The large investment necessary to increase the capacity of all of these efforts sufficiently to meet the total need is beyond immediate reach. Moreover, the uncoordinated efforts of many institutions may not generate the greatest returns on the investment. New approaches certainly must be tried in order to achieve more rapid progress in extending the benefits of post-secondary education to Minnesota's disadvantaged youth.

The Commission believes that a cooperative effort which can supplement and to some extent coordinate the individual efforts of the various post-secondary institutions should be supported. Specifically, the Commission proposes that the 1971 Legislature establish an experimental, cooperative post-secondary education center as a vehicle through which post-secondary education can seek disadvantaged youth.

The primary purpose of the center should be to provide a necessary link between the disadvantaged population and post-secondary education by providing (1) assessment, counseling, and recruitment services, and (2) a limited program of compensatory and basic education. Secondary purposes include assisting and coordinating the individual efforts of post-secondary institutions and advising institutions on needs of disadvantaged youth and an effective approach for meeting these needs. The center should be viewed as a cooperative effort of all post-secondary institutions, and the center director should report to an operating board comprised of two members each from the University of Minnesota, the state colleges, the state junior colleges, the area vocational-technical schools, and the private colleges, all appointed by the Commission, and one member of the Commission's staff. The board should have full responsibility for operation of the experimental center with review and evaluation by the Commission. A working advisory committee comprised primarily of members of the disadvantaged population, but perhaps including others who work with that population, should be an integral part of the center's administrative structure. The center should be located near a major concentration of the disadvantaged population in the Twin Cities.

Two conditions of this proposal must be carefully noted. First, the cooperative center cannot replace the efforts of individual institutions nor relieve any institution of responsibility for the identification and recruitment of disadvantaged youth.

Rather, the center is intended to supplement, complement and strengthen the efforts of individual institutions; it should provide the focal point for institutions to work together and to combine their individual efforts in order to achieve greater impact. Second, the center should be viewed as experimental and should be carefully evaluated. If the approach proves to be promising, the center should be given permanent status as soon as its potential success is demonstrated. If the center does not demonstrate potential effectiveness, it should be discontinued, and an alternative approach should be sought.

In order to have reasonable opportunity to succeed, the cooperative post-secondary center should receive appropriations of $250,000 for Fiscal Year 1972 and $500,000 for Fiscal Year 1973.

The Commission recommends that the 1971 Legislature make post-secondary education for disadvantaged students feasible by making substantial appropriations for student financial aids.

State scholarship and grant-in-aid appropriations of $3,820,850 for Fiscal Year 1972 and $7,496,850 for Fiscal Year 1973, as recommended in the previous section of this report, are a necessary ingredient in any serious effort to solve the problem of providing post-secondary education for Minnesota's disadvantaged population. Without adequate student financial assistance, post-secondary education is beyond the reach of the disadvantaged population. Without adequate student financial aid, post-secondary education opportunities are effectively available only to the more advantaged majority. Without adequate financial assistance for disadvantaged students, the long-cherished ideal of equal educational opportunity for all cannot become a reality.

The Commission recommends that the 1971 Legislature provide the funds necessary for Minnesota's public institutions of higher education to meet the needs of individual students, both advantaged and disadvantaged, through effective counseling services.

Addressing attention to serving disadvantaged students, who begin post-secondary education with more deficiencies than most of the more advantaged majority, brings into sharper focus the general need to provide more adequate student counseling and assessment services in Minnesota's public institutions. Entering post-secondary education requires a significant personal adjustment by all students. Those with greater deficiencies tend to have greater difficulty in making the adjustment satisfactorily. Disadvantaged students clearly need special assistance in resolving family and personal problems which interfere with successful academic performance.

Most students need assistance in dealing effectively with the kind of problems enumerated above. Because their problems are both more intensive and more extensive, disadvantaged students need more assistance. Accordingly, as the number of disadvantaged students entering an institution increases, the need for counseling services rises dramatically. Unless such services are provided and unless, through such services, institutions can assume greater responsibility for the success of students than previously possible, post-secondary education will simply become another frustrating experience for the disadvantaged student, and retention will be low.

Since the needs for and the adequacy of present counseling services vary among Minnesota's public post-secondary institutions and systems, specific recommendations for the amount of funds needed to provide effective counseling and assessment services must be left to the individual institutions and systems. The Commission urges the 1971 Legislature to give full consideration to requests for strengthening these services.

In order to provide diversity of opportunities for disadvantaged students and to facilitate the extension of post-secondary education to disadvantaged students by both public and private instiutions, the Commission recommends that *the 1971 Legislature authorize the Commission to enter into contracts with Minnesota private colleges providing for special payments for the education of disadvantaged students.*

As indicated above, effectively serving disadvantaged students is costly. Although most of Minnesota's private colleges already have demonstrated their willingness and ability to serve disadvantaged students, the cost of serving disadvantaged students is sufficiently large as to be a serious drain on institutional resources. Accordingly, the number of disadvantaged students which private colleges can be expected to serve under present conditions is limited.

Since the state must generate more spaces for the effective education of disadvantaged students and since private colleges can provide some of those spaces at a lower cost to the state than is required for comparable service in public institutions, the Commission believes that contractual arrangements providing special payments to private colleges for educating economically disadvantaged students who receive state grants-in-aid would be a feasible and financially favorable means for extending post-secondary education to Minnesota's disadvantaged population. This proposal will be discussed more fully in a later section on utilizing private colleges in meeting Minnesota's post-secondary education needs.

The Commission recommends that post-secondary education be made more accessible to the urban disadvantaged populations of the Twin Cities by establishing a state junior college in St. Paul, strengthening programs for disadvantaged students at Metropolitan State Junior College, and increasing the capacities of the area vocational-technical schools in Minneapolis and St. Paul.

A number of studies undertaken by the Commission have demonstrated the close relationship between the geographic accessibility of educational opportunity and attendance.[4] In order to increase educational opportunity among the urban disadvantaged, the Commission recommends three specific actions. First, the Commission recommends legislative approval and funding of a state junior college in St. Paul. It is recommended that this junior college plan for a maximum enrollment of 4,500 students. It is also recommended that this college develop a broad curriculum embracing both general and occupational education programs in recognition of the needs of the disadvantaged. Secondly, it is recommended that Metropolitan State Junior College, located in Minneapolis, review its program with a view toward making any changes necessary to orient its various programs to the needs of the disadvantaged. Finally, the Commission recommends that the legislature provide assistance for the area vocational-technical schools in St. Paul and Minneapolis to increase their capacities to accommodate larger enrollments as rapidly as possible.

The Commission recommends that the 1971 Legislature stimulate and facilitate the development of appropriate programs in institutions meeting the needs of disadvantaged students by establishing an educational opportunity fund to support such ventures.

If disadvantaged students are to be served effectively, both the students and the institutions must change. It has already been suggested that through appropriate counseling services post-secondary institutions must help disadvantaged students to adjust to and function effectively in terms of the environment and expectations of the post-secondary institution. Closing the gap between the disadvantaged student and the institution will also require that the institution adapt programs and methods to the greater needs of the disadvantaged students.

Instituting the kind of institutional change described above will require substantial investments. Programs undertaken without new sources of funds, in addition to regular budgets, have little chance of success. Failure to institute such changes will result in unsatisfactory experiences for disadvantaged students and high drop-out rates. Producing frustrated drop-outs is not the way to extend post-secondary education to Minnesota's disadvantaged.

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[4] See, e.g., Richard C. Hawk et al, "Rates of College Attendance in Minnesota," *Minnesota Higher Education*, Minnesota Higher Education Coordinating Commission, March 1970.

In order that Minnesota institutions may begin to develop effective programs of sufficient scope to serve the needs of the disadvantaged students of Minnesota's population, the Commission recommends that the 1971 Legislature establish an educational opportunity fund. It is proposed that this fund be administered through the Higher Education Coordinating Commission which should be assigned responsibility for stimulating and reviewing proposals from institutions for establishing new programs or strengthening established programs which are designed to serve disadvantaged students. Under this arrangement, the Commission will make grants to institutions on the basis of the relative potential of proposed programs for serving disadvantaged students effectively and the need for such programs in different types of institutions and at different locations in the state. The minimum appropriation necessary to begin a broad scale attack on solving the problems of disadvantaged students is estimated to be $3 million.

The problem of developing programs for successfully meeting the needs of disadvantaged students is immense. It should be noted that an appropriation of $3 million is regarded as only minimally adequate for beginning a meaningful effort aimed at providing programs with the capacity for accommodating disadvantaged students effectively. Such an appropriation would provide for service to 1,500 disadvantaged students with an average annual investment of $1,000 per student.

IV. EXPANDING THE CAPACITY OF PUBLIC POST-SECONDARY EDUCATION

Although the growth will not be so dramatic as it was during the decade of the 1960's, Minnesota post-secondary enrollment will continue to increase significantly during the 1970's. It is not until after 1980 that the number of Minnesota residents in the prime post-secondary age group of 18-21 will decline sufficiently to cause post-secondary enrollments to taper off.

Projected enrollments have two important implications for planning to meet the state's needs for post-secondary education during the 1970's. First, post-secondary capacity must be expanded to accommodate larger numbers of students. Second, to meet needs efficiently, the expansion must be initiated immediately and should be completed by 1978.

> *In order that the state's needs for post-secondary education may be met as efficiently as feasible, the Commission recommends that the 1971 Legislature take necessary steps to assure that appropriate expansion, both through increasing the capabilities of existing public institutions to accommodate more students and through establishing new public institutions, can be completed before 1978.*

In accordance with the request of the 1969 Legislature, the Commission staff transmitted research reports on factors relevant to decisions on new public institutions to the appropriate legislative committees in May of 1970,[5] and the Commission transmitted its statement of recommendations on new institutions in September of 1970. The Commission's statement of recommendations on new institutions follows.

> The 1969 Legislature requested that the Higher Education Coordinating Commission make recommendations on the possible establishment of an upper division state college and a state junior college in St. Paul. In order to fulfill this charge, the Commission has engaged in extensive research and has sought the advice of a consultant from outside the state who is a recognized national authority in higher education.
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> Clearly, questions as to the feasibility and desirability of a state junior college in St. Paul and an upper division state college must be considered in the context of the total needs of the state for expanding post-secondary education capacity, of any other new institutions which may be desirable, and of the relative priorities which should guide state action on expanding capacity. The Commission is well aware of its responsibility to assist the legislature with comprehensive planning for post-secondary education.
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> In presenting recommendations on new institutions, the Commission is cognizant of the substantial efforts which have already been made to provide adequate expansion of higher education opportunities. During the last decade, 25 new public post-secondary institutions began operations. Eight public post-secondary institutions already have been authorized and will open during the decade of the 1970's. Four additional institutions have been recommended by the Commission and wait legislative authorization. The expansion represented by these new institutions has been adequately justified, both in terms of increasing the total post-secondary education capacity in the state and of making post-secondary opportunities more accessible to Minnesota residents.

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[5] Minnesota Higher Education Coordinating Commission, *Information Relevant to Decisions on an Upper Division State College and a Junior College in St. Paul,* Staff Report to the Finance Committee of the Senate and the Appropriations Committee of the House of Representatives, May 1970. Minnesota Higher Education Coordinating Commission, *Analyses and Conclusions Based on Information Relevant to Decisions on an Upper Division State College and a Junior College in St. Paul,* Staff Report to the Finance Committee of the Senate and the Appropriations Committee of the House of Representatives, May 21, 1970.

The Commission also recognizes the fact that plans for new institutions must be related to plans for growth of existing institutions. Obviously, the establishment of new institutions along with the opening of the new institutions already authorized or recommended will require that officers of existing institutions adjust their present long-range growth projections.

Meeting the post-secondary needs of Minnesota will require growth and expansion. It is the judgment of the Commission that immediate plans should be made for developing permanent capacity for about 222,000 full and part-time students by 1978. This represents an increase of 68,365 over the 1969 enrollment of 153,635.

The issue then is not whether or not expansion must take place, but rather how much of the projected enrollment growth can and should be accommodated in existing institutions and how much capacity should be generated through establishing new institutions. Even with a permanent capacity for 222,000 Minnesota post-secondary institutions will need to stretch their capacities in order to accommodate a peak enrollment of more than 234,000 in 1980 on a temporary basis. Relief from pressures of increasing enrollments is expected to come as Minnesota experiences a decline in the prime post-secondary age groups after 1980. Present projections indicate that permanent capacity for 222,000 students should be adequate through about 1988.

Of equal importance to the need to provide adequate total capacity for post-secondary enrollments is the concern for locating the appropriate kinds of post-secondary opportunities in such a way as to provide for the meeting of needs most effectively. Accordingly, the desirability of providing new kinds of opportunities in various locations throughout the state is a major factor affecting recommendations for new institutions.

Since all of the great growth in post-secondary enrollments for the next two decades will fall in the 1970's, immediate, positive, legislative action to provide necessary expansion of educational opportunities is required. The Commission respectfully recommends the following action:

1. *The 1971 Legislature should provide sufficient building funds for rapid development of new institutions already authorized and recommended*[8] *as well as for necessary improvement of physical facilities on existing campuses. The pattern of enrollment growth projected for the next two decades indicates that delaying construction of needed facilities on both new and old campuses would not be in the best interests of the state.*
2. *The Commission urges the establishment of a state junior college in St. Paul. The Commission recommends that the 1971 Legislature appropriate funds to the State Junior College Board adequate for the planning and establishment of this institution as soon as possible. The absence of a comprehensive two-year commuter institution in a city with a population of 300,000 represents a serious deficiency in the state's admirable efforts to make post-secondary opportunities as geographically accessible as practical for all Minnesota residents. Moreover, as the University of Minnesota continues to shift relative emphasis from lower division to upper-division and post-baccalaureate programs, the need for additional lower division opportunities in the Twin Cities will become critical.*
3. *A state college designed to accommodate approximately 5,000 upper division students and 3,000 lower division students by 1980 should be established in the Twin Cities metropolitan area. While the concept of a free-standing upper division institution is appealing, the experience of such institutions would suggest that a college which emphasizes upper division*

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[8] Four new state junior colleges which were previously recommended by the Commission have not as yet received legislative authorization. The Commission recommended that these institutions be located at Alexandria, Hutchinson, New Ulm, and Owatonna.

programs is a more realistic approach. Such a state college would increase the diversity of opportunities available to metropolitan area residents on a communting basis. It would also provide the opportunity for developing new programs and other innovations in curriculum. The 1971 Legislature should provide funds to the State College Board for developing specific plans for a Twin Cities state college in order that a final decision by the 1973 Legislature on establishment of the institution may be based on a more complete assessment of the nature of the proposed institution, its curriculum, the students it would strive to serve, the investment necessary for developing an appropriate campus, and the way in which its role would relate to existing institutions. The Higher Education Coordinating Commission should be involved in the development of these plans, and it should make recommendations on implementation of these plans to the legislature in 1973.

4. *The Rochester community offers an unusually fine setting for a university and residents of the area have expressed a strong feeling of need for advanced educational offerings to be provided in the community. Although the 1969 Legislature did not request that the Commission consider a university campus in Rochester, considerable attention has been focused on the desirability of such an institution since the last legislative session. The Commission continues to believe that development of undergraduate medical education by the Mayo Clinic and Foundation in Rochester is in the best interests of the state and should be accomplished as soon as feasible with state support.*[7] *A University of Minnesota campus in Rochester would provide strong support for undergraduate programs in medicine in Rochester.*[8]

   Development of a complete description of the nature, purpose, programs, and costs of a University of Minnesota branch in Rochester should precede a final decision on establishing such an institution. Some pertinent questions regarding the proposed institution, such as its impact on Winona State College, Rochester State Junior College, and other institutions in the area, cannot be fully considered in the absence of a more complete description of the proposed institution. Accordingly, the Commission recommends that the 1971 Legislature appropriate planning funds to the University of Minnesota in order that a decision by the 1973 Legislature may be based on more adequate information. If detailed study confirms present indications of need, a branch of the University of Minnesota should be established in Rochester. The Higher Education Coordinating Commission should be involved in the development of these plans, and it should make recommendations on implementation of these plans to the legislature in 1973.

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[7] The amount and nature of any state funding for such a medical education program should be determined on the basis of number of Minnesota residents to be accommodated and the nature of the program.

[8] Largely because of the impact such an institution would have on other colleges and universities in the area, a great deal of discussion centered around the implications of this recommendation.

V. FACILITATING GREATER UTILIZATION OF PRIVATE COLLEGES IN MEETING MINNESOTA'S POST-SECONDARY EDUCATION NEEDS

In appropriating funds to the Minnesota Higher Education Coordinating Commission, the 1969 Legislature requested "a staff study of the current and emerging needs and alternative solutions for post-secondary education in Minnesota, in cooperation with public post-high school institutions and private colleges and universities, which shall be reported to the legislature and the Governor on or before November 15, 1970."

Clearly, the concern of the 1969 Legislature for identifying acceptable alternative means for providing the services of post-secondary education is justified. Expanding needs of the state and its residents for the services and benefits of post-secondary education together with rapidly rising costs provide urgent reasons for assessing new ways for the state to fulfill its responsibility for post-secondary education.

Traditionally, establishing and financing public institutions of post-secondary education have been the only means utilized by the state in providing post-secondary educational opportunities for its residents in developing an educated citizenry. Alternatives for providing post-secondary education have been limited to such considerations as the number of public institutions which should be established or financed by the state, where such institutions should be located, what type of institutions they should be, and how much the state should invest in the support of these institutions. Little serious consideration was given to other possible means of fulfilling the state's responsibility for post-secondary education.

Passage of legislation authorizing a State Scholarship program by the 1967 Legislature recognized the facts that (1) simply providing public institutions of post-secondary education is not sufficient for fulfilling the state's responsibility to make post-secondary education realistically available to all Minnesota residents who can and should benefit from education beyond the high school, and (2) the state's interest in post-secondary education must be more pervasive than an interest in maintaining public institutions. In providing that a state scholarship recipient may attend either a public or a private higher education institution in Minnesota, the 1967 Legislature also recognized the fact that the state can appropriately provide post-secondary education opportunities for its residents in other ways. Action of the 1969 Legislature appropriating funds for state grants-in-aid, as well as increasing the appropriation for scholarships for students attending both public and private colleges and universities, represented increased effort reflecting recognition of these facts.

While post-secondary education has always been the responsibilty of the state, privately controlled colleges have shared this responsibility voluntarily and without direct financial assistance from tax funds since the day that Minnesota became a state. However, in recent years the proportion of post-secondary needs being met by the state through public institutions has grown rapidly, while the proportion of needs being met voluntarily by private colleges has declined rapidly. Students attending private colleges presently comprise less than 20 per cent of total post-secondary enrollments in Minnesota and, while projections indicate a modest growth in enrollment, the private college percentage of total enrollment will continue to decline in the future.

The continuing decline in the proportion of Minnesota's post-secondary education needs which are met by private colleges will require a corresponding increase in post-secondary services provided by the state through increasing the number of student spaces available in public institutions. An alternative is for the state to utilize the services of private colleges more extensively in fulfilling its responsibility to provide post-secondary education.

In order to provide a thorough assessment of this alternative means for meeting part of the needs of the state for post-secondary education, the Commission, with support of a grant from the Bush Foundation, arranged for a panel of five distinguished, out-of-state educators to work with the Commission staff in studying Minnesota's private colleges and to make recommendations to the Commission on possible action by the state to achieve greater utilization of private colleges in meeting the state's future needs for post-secondary education. Former United States Commissioner of Education, Earl J. McGrath, was appointed chairman of the Private College Study Panel. Also appointed to the panel were Chancellor John D. Millett, of the Ohio Board of Regents, Chancellor Harry Ransom, of the Texas University System, Vice President Kenneth Thompson, of The Rockefeller Foundation, and President Robert Wert, of Mills College.

The conclusions of the Private College Panel indicate that private colleges have made impressive contributions to Minnesota and that their present programs provide the foundation for greater potential contributions in the future.[9] However, the Panel report also clearly suggests that this potential will be achieved only if the state takes positive action to utilize private colleges in meeting post-secondary needs of the state. The Panel also concluded that the privileges of incorporation as nonprofit corporations and exemption from certain taxes, which the state has accorded to private colleges in recognition of the public interest served by them, are not sufficient to sustain the operations of these colleges in the future.

To meet Minnesota's needs, the state must expand the capacity of post-secondary education to accommodate an additional 80,000 students by 1980. Perhaps the most costly means of providing the additional capacity required would be to follow previous policies which would result in an increasingly larger proportion of post-secondary education provided by public institutions. The Commission agrees with the Private College Study Panel that taking positive action to supplement expansion of public post-secondary education capacity with positive action to achieve greater utilization of private colleges in meeting future needs is more prudent. Accordingly, the Commission recommends three positive steps to facilitate greater utilization of private colleges in meeting Minnesota post-secondary education needs.

> *In order that Minnesota residents may have a realistic opportunity to attend the institution of their choice, either public or private, in Minnesota, the Commission recommends that the state substantially increase its investment in state scholarships and grants, beginning with appropriations of $3,820,850 for Fiscal Year 1972 and $7,496,850 for Fiscal Year 1973.*

In addition to serving the purposes of stimulating Minnesota's most able young people to pursue post-secondary education in Minnesota and of making post-secondary education economically available to Minnesota residents from all socio-economic segments of the population, the State Scholarship and Grant-in-Aid programs serve to provide the opportunity for Minnesota residents to attend the college or university of their choice. In the absence of state scholarships and grants, many students do not have a genuine opportunity to choose a private college because of the large tuition differential of private colleges over public institutions. It is significant that, while only 2.5 per cent of state junior college sophomores plan to transfer to private colleges, 47 per cent indicated that they would attend a private institution if the tuition was more comparable to tuition in public institutions.[10]

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[9] Earl J. McGrath et al., *Minnesota Private Higher Education: An Assessment of the Present Status and Future Role of Private Higher Education in Minnesota,* Minnesota Higher Education Coordinating Commission.

[10] Minnesota Higher Education Coordinating Commission, *Analyses and Conclusions Based on Information Relevant to Decisions on an Upper Division State College and a State Junior College in St. Paul,* pp. 29-31.

Making possible the opportunity for a significant proportion of the Mnnesota population to choose a private college is a necessary first step in attempting to achieve greater utilization of private colleges. The proposed increase in appropriations for state scholarships and grants can contribute to this objective.

In order to facilitate desirable improvements in private college physical plants, the Commission recommends that the 1971 Legislature establish a state higher education facilities agency which is authorized to issue bonds for the construction of physical facilities on private college campuses to be used by private colleges on a lease basis until all principal and interest has been paid with rental income at which time ownership of the facility is transferred to the private college.

While Minnesota's private colleges have some unused capacity, some buildings need to be replaced and others will need replacement during the next decade. In addition, some private colleges need to expand their physical plants in order to accommodate desirable increases in enrollment. Financing the construction of facilities through issuance of bonds by a state higher education facilities agency provides the opportunity for low cost financing of capital expansion and improvement with no investment by the state required. Such arrangements are serving effectively in other states. Legislative action establishing a state higher education facilities agency with the authority described above will provide for the expansion and improvement of physical plants needed for greater utilization of private colleges. All administrative costs should be apportioned among participating institutions. It is proposed that the agency be similar to the Ohio Educational Facility Commission, a description of which appears in Appendix F.

In order to provide post-secondary education for Minnesota residents at the lowest feasible cost to the taxpayer, the Commission recommends that the 1971 Legislature authorize the Higher Education Coordinating Commission to contract with approved private colleges and universities for providing an acceptable program of collegiate education for Minnesota residents. Such contractual arrangements should provide for payment from the State Treasury to each private college providing the service prescribed by the contract of an amount not to exceed $500 per student in each institution which grants a bachelor's degree and $400 per student in each institution which grants an associate degree, but not a bachelor's degree, for each Minnesota resident enrolled as a full-time student in excess of the number of Minnesota residents enrolled as full-time students in each private college in the fall of 1970 and, in addition, an equal amount per student ($500 for senior colleges and $400 for junior colleges) for every student who receives a state grant under the Minnesota State Grant-in-Aid program and is enrolled in each private college as a full-time student without regard to the number of students previously enrolled.

During the 1970-1971 academic year, current per student cost to the state for educating students in state colleges is estimated to be $911. Assuming no increase in costs in the state colleges, increases in enrollments in the state colleges will require additional investment of state funds of $911 per student. That proportion of enrollment increases which the state could provide for in private colleges would represent a savings to the state in current expenditures of $411 per student, the difference between the per student cost to the state of educating a student in a state college ($911) and the proposed maximum payment ($500) for educating a student in a private college. The comparable current expenditure per student in state junior colleges is estimated to be $775. Accordingly, savings to the state in current expenditures by providing for increases in enrollments in private junior colleges would be $375 per student, the difference between current expenditures per student of $775 in state junior colleges and the proposed payment of $400 for educating a student in a private junior college. An additional long-range savings will accrue to the state as distributing a larger proportion of enrollment increases from state institutions to private colleges permits reduction in the physical plant expansion of public institutions of higher education.

The additional payment to private institutions for each state grant recipient attending a private college recognizes the fact that providing effective collegiate education for disadvantaged students entails a higher per student cost in either public or private institutions. The payment to private colleges for educating state grant recipients will facilitate their providing programs for disadvantaged students, thereby increasing the opportunities available to disadvantaged students. Under such an arrangement, private colleges could participate more fully in educating students from all socio-economic segments of Minnesota's population. The Commission estimates that appropriations of $678,100 would provide for the education of 1,368 Minnesota students in Fiscal Year 1972 and $1,356,300 would provide for educating 2,736 Minnesota students in Fiscal Year 1973. The basis for these estimates appears in Appendix G.

VI. ACHIEVING GREATER EFFECTIVENESS THROUGH COOPERATION WITH NEIGHBORING STATES

Part of the need for increasing the availability and accessibility of post-secondary education for Minnesota residents can be achieved without establishing new institutions or developing new instructional programs, through reciprocal arrangements with neighboring states. As Minnesota and its neighbors developed their respective state systems of post-secondary education, many institutions were located near their borders. In some areas, such as those of Duluth-Superior and Fargo-Moorhead, Minnesota and its neighbors each established a state higher education institution just a few miles apart. In keeping with the traditions of state autonomy, each state viewed their respective institutions as serving their own residents. Each state established barriers which mitigated against service to residents of the neighboring states. Each state established substantially higher tuition charges for residents of neighboring states than for home state students, and residents of neighboring states often were required to meet higher admission standards.

Under the conditions described above, many residents of both Minnesota and its neighboring states found that post-secondary opportunities which were quite accessible geographically were actually quite inaccessible because of the barriers of invisible state lines. Since opportunities provided by neighboring states were not readily accessible, each state was faced with the problem of providing the complete range of opportunities needed by its residents, even though the inefficiencies of duplication of institutions and programs along the two sides of the border was the result. The kind of joint planning which could lead to greater economy and effectiveness in meeting the needs of residents of neighboring states was precluded.

An important step toward improving the situation was taken by Minnesota and Wisconsin in 1967 when legislation was passed in both states authorizing the higher education coordinating agency in each state to enter into higher education reciprocity agreements with neighboring states. As a result, 300 Minnesota residents who reside near the Wisconsin border have attended Wisconsin state institutions of higher education during the 1969-1970 and 1970-1971 academic years without suffering the penalties of nonresident tuition and admission standards under an experimental Minnesota Higher Education Reciprocity Agreement, which appears in Appendix H. In return, Wisconsin residents who reside near the Minnesota border were granted comparable advantages in Minnesota state higher education institutions.

Developing and administering a viable inter-state higher education reciprocity agreement has been a challenging endeavor. Much of the difficulty has revolved around the fact that the number of Minnesota residents seeking to attend Wisconsin institutions is more than three times greater than the number of Wisconsin residents seeking to attend Minnesota institutions.

In order to achieve a permanent agreement which more adequately meets the needs of both states, staff members from the two higher education coordinating agencies currently are attempting to negotiate an improved and expanded agreement. Although achieving a completely satisfactory agreement may require several years of continuing negotiation and experience, some improvements can be implemented for the 1971-1972 academic year.

The North Dakota State Legislature passed legislation authorizing the State Board of Higher Education to negotiate higher education reciprocity agreements with neighboring states in 1969. Since that time the Commission and the North Dakota board have worked diligently to develop a Minnesota-North Dakota Higher Education Reciprocity Agreement which is considerably broader than the Minnesota-Wisconsin agreement. Pending final approval, the agreement with

North Dakota, which appears in Appendix I, will become effective in the fall of 1971.

> *The Commission recommends that the policy of seeking to improve the availability and accessibility of post-secondary education opportunities to Minnesota residents through reciprocity agreements with neighboring states be continued and extended to include area vocational-technical schools.*

Passage of an amendment by the 1971 Legislature extending the authorization for reciprocity agreements to include public area vocational-technical schools would provide additional flexibility for the Commission to develop interstate agreements best suited to meet the total post-secondary needs of the state. The authorization to include area vocational-technical schools could be an important factor in achieving balance in the number of students crossing Minnesota's borders in both directions while extending the benefits of reciprocity agreements to more Minnesota residents.

In addition to appropriate action at the state policy level, individual institutions working in concert with institutions in neighboring states can develop and implement plans for cooperative efforts to strengthen the individual institutions involved while eliminating unwarranted duplication. The foundation for such cooperation and considerable progress toward achieving cooperative goals has been demonstrated by Moorhead State College, North Dakota State University and Concordia College. These three institutions—one a Minnesota state institution, one a North Dakota state institution and one a private institution—have identified a variety of ways in which they can cooperate in providing better service to the Fargo-Moorhead area with greater economy of effort while strengthening the individual institutions.

> *The Commission recommends that the kind of inter-state cooperative efforts which have been undertaken by Moorhead State College, North Dakota State University, and Concordia College be given strong encouragement by the 1971 Legislature.*

VII. CLARIFYING THE ROLES OF POST-SECONDARY INSTITUTIONS AND SYSTEMS

In establishing, maintaining, and financing public post-secondary institutions, the state has responsibility to prescribe the mission, or role and scope, of each institution in order that (1) the purposes for which the institution is established and maintained are achieved, (2) the return on tax funds invested in the institution is consistent with needs of the state, and (3) all public institutions function in a coordinated and complementary manner to provide for the greatest feasible effectiveness and economy of effort in meeting the total needs of the state. Since conditions and the needs of the state are constantly changing, the mission of institutions must be reviewed periodically.

Experience in reviewing proposals for new instructional programs during the past year under the program review process, which is discussed in a later section of this report, has revealed the need for a review and clarification of institutional missions. The Commission will review the role and scope of each institution of public post-secondary education. The Commission proposes that the governing boards of the four public systems of higher education prepare detailed statements of the role and scope of each of their institutions in relation to the total pattern of post-secondary education, during the next biennium. The Commission further proposes that these statements be forwarded by the governing boards to the Commission for review and comments and that these statements, together with the Commission's comments and recommendations, be reported to the 1973 Legislature.

The Commission has studied one aspect of the total problem of clarifying institutional missions in responding to the request by the 1969 Legislature for "an inquiry into the relationship between area vocational schools and other institutions of higher education in Minnesota." The Commission's full report on the relationship between area vocational-technical schools and other post-secondary institutions, including elaboration on and the rationale for each recommendation appears in a separate report.[11] The recommendations are summarized below.

> *Occupational programs should continue to be offered by all types of post-secondary institutions. Area vocational-technical schools should continue to offer a wide range of programs of two years or less which provide for initial occupational entry and retraining for advancement and occupational adjustment. State junior colleges located in areas which are not served by area vocational-technical schools should offer the range of occupational programs which would be provided by an area vocational-technical school if one were located in the area. State junior colleges located in areas which are served by an area vocational-technical school should offer a more limited range of occupational programs, depending on the population and needs of the area, with emphasis on programs of two years in duration and those which are most closely related to the academic programs of the institution. Public four-year institutions should offer occupational programs of more than two years in duration. Four-year institutions which are located in areas served by area vocational-technical schools, but not by state junior colleges, also should offer some occupational programs of two years or less with emphasis on two-year programs which are closely related to their academic programs in order to meet the commuter needs of the area. Four-year institutions also may appropriately offer a limited number of terminal occupational programs of two years or less for experimental or laboratory purposes or to meet the needs of students for whom completion of a four-year program is determined not to be an appropriate goal.*

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[11] Minnesota Higher Education Coordinating Commission, *An Inquiry Into the Relationship Between Area Vocational-Technical Schools and Other Institutions of Higher Education in Minnesota,* December 1970.

Proposals for establishing new public post-secondary institutions of all types should be reviewed by the Higher Education Coordinating Commission which should recommend legislative authorization for all proposed institutions receiving favorable review by the Commission.

Expanded cooperation between higher education institutions and area vocational-technical schools which are located in the same or neighboring communities should continue to be encouraged. Economic incentives should be provided for those institutions which seek to adopt cooperative programs and which seek to add programs which are judged to insure that educational opportunity is made fully accessible to as many Minnesota residents as practical.

To insure the most effective use of state resources, the program review function of the Commission should be strengthened and should continue to include considerations of new and existing vocational and occupational education programs along with all other post-secondary programs. The Commission should continue to study the needs of students and develop information on manpower demands, both in the state and nation. Through the Commission, the state of Minnesota should not only discourage unwarranted proliferation of occupational programs, but should also generate information to identify programs required to meet current and emerging needs in vocational and occupational areas.

The Commission should review and make recommendations to the State Board for Vocational Education on the annual Minnesota State Plan for Vocational-Technical Education, *as it relates to post-secondary education. All institutions which conduct vocational-technical programs should follow, to the largest extent possible, a policy of qualifying for reimbursement from federal and state funds administered by the State Board for Vocational Education.*

Legislation should be enacted providing authorization for any area vocational-technical school to become a state institution under the State Junior College Board upon petition by the local school board to the Minnesota Junior College Board which will review the request and make recommendations to the Minnesota Higher Education Coordinating Commission, which will take final action on the request after consultation with the State Board for Vocational Education and will report such action to the legislature.

Legislation should request the State Junior College Board, the State Board for Vocational Education and the local school boards in those communities beyond the seven-county metropolitan area, where both an area vocational-technical school and a state junior college exist, to explore, identify and develop a plan to combine the two institutions in such communities. This cooperative plan should be reported, along with implications and problems evident in its implementation, to the Minnesota Higher Education Coordinating Commission by July 1, 1972, in time for its consideration as part of the Commission's recommendations to the 1973 Legislature.

VIII. MEETING THE CONTINUING EDUCATION AND COMMUNITY SERVICES NEEDS OF MINNESOTA

Residents of Minnesota continue to expect that higher education institutions will apply their expertise and resources to meeting the needs of adults for continuing education and to assisting in solving the problems of the state and its communities. Perhaps the most notable example of effectiveness in meeting Minnesota's needs for continuing education and extension activities has been the University of Minnesota's programs under the Agricultural Extension Service, the agricultural experiment stations, and the application of research to solving problems of the agricultural industry and improving rural life.

There was a time when activities of the Agricultural Extension Service could be viewed as sufficient for meeting the state's total needs for continuing education and extension services. As Minnesota's needs have become more complex and as the state continues to change from a predominantly agricultural society to a multi-purpose society with increasingly larger percentages of the population in urban areas higher education institutions have not developed a corresponding increase in capacity to meet new needs for continuing education and community services. A major reason for the failure in higher education institutions to develop capacity to meet emerging needs is the absence of necessary funds to support non-agricultural related continuing education and community service activities.

While the Agricultural Extension Service has been given direct financial support from Federal, state, and county governments, most other continuing education and community service activities have had to be self-supporting, funded through foundation or other grants, or financed from instructional or general operating budgets of institutions. The absence of adequate direct support has inhibited both the continuity and magnitude of effort required to meet emerging needs.

In recognition of the need for higher education to assist in solving the emerging needs of society, the Congress enacted Title I of the Higher Education Act of 1965 (P.L. 89-329) designed "to strengthen continuing education and extension methods and teaching and public service resources of colleges and universities." Unfortunately, appropriations have been held to only about 20 per cent of the amount authorized.

Although Minnesota colleges and universities have made some worthy contributions with the limited dollars which have been available, the impact of past efforts has been less than desirable, and the need to make programs self-supporting has functioned to keep them out of the reach of those who cannot afford to pay relatively high costs.

In order to facilitate maximum effectiveness and economy of effort in meeting the state's needs for continuing education and community services, the Commission proposes to work toward development of a comprehensive, coordinated statewide plan for adult and continuing education and community service activities. In doing so, the Commission will give particular attention to the development of instructional technology that will maximize the effective use of limited teaching resources. Commission advisory committees already are formed for accomplishing this task. However, it is apparent that the state must assume responsibility for some direct support of continuing education and community service programs if adequate progress is to be made.

In order to provide for progress in meeting the state's emerging needs for continuing education and community service activities, the Commission recommends that the 1971 Legislature (1) provide funds for credit bearing continuing education programs at levels commensurate with funding for regular academic *programs, thereby eliminating any cost differential of day and evening school classes to the student, (2) provide more adequate funds for personnel to develop and administer non-credit continuing education programs, the need in each instance to be determined by the individual systems, and (3) appropriate $500,000 ($200,000 as matching funds and $300,000 for state grants to institutions) for Fiscal Year 1972 and $700,000 ($200,000 as matching funds and $500,000 for state grants to institutions) for Fiscal Year 1973 to be used as matching funds for programs receiving federal assistance under Title I of P.L. 89-329 and for state grants to collegiate institutions for support of community service programs.*

A more complete discussion of the above recommendation and the need for the proposed action is presented in Appendix J.

IX. SHARING THE COSTS OF HIGHER EDUCATION

Economic, cultural, and social growth of Minnesota is dependent upon a well-educated citizenry and highly developed human resources. Since such growth is a prime matter of public interest, it is appropriate that basic responsibility for post-secondary education, which is the most comprehensive means for developing Minnesota's human resources, rests with the state. Similarly, since all residents of the state benefit indirectly from the economic, cultural and social growth made possible by developing Minnesota's human resources, it is appropriate that all residents share in the support of post-secondary education according to their individual economic statuses through the state's system of taxation.

The greatest direct benefits of post-secondary education accrue to the student whose talents are developed in order that he may experience the personal advantages of a more satisfying and often more economically rewarding future. Since the individuals who benefit most directly from post-secondary education are those who become educated, it is appropriate that the student share the costs of his education (just as the student must inevitably share responsibility with the post-secondary institution for his own learning).

Traditionally, the state has fulfilled its responsibility for post-secondary education by paying the largest share of the costs of instructional programs in public post-secondary institutions. A smaller share of these instructional costs has been borne by the student through tuition. In addition, the state has paid for construction of physical facilities necessary for the instructional process to take place, and the student has paid for books and supplies, room and board, and the incidental expenses of post-secondary education. Loss of income from earnings while in school is another cost to the student. Both the state and the student have received financial assistance at varying times and in varying amounts from the Federal government, local governments, and private sources.

In the past, the share of instructional costs to be borne by the student has varied as rates of tuition were determined periodicaly, either arbitrarily or according to such partially relevant factors as rates of tuition in public institutions in other states. In its report to the 1969 Legislature, the Higher Education Coordinating Commission recommended that the student's share of instructional costs, as reflected by both tuition and mandatory fees, should approach one-third.

The State Junior College Board, State College Board, and University of Minnesota Board of Regents adjusted tuition rates for the fall of 1969 reflecting this policy.

Since budget estimates of the three state collegiate systems indicate that instructional costs will rise again in the fall of 1971, it was suggested that the Commission policy statement on tuition and fees should be reviewed. As instructional costs continue to rise, there is a natural tendency for students to prefer that the percentage of such costs borne by the state be increased in order that tuition rates may be held constant. There is an equally natural tendency for many taxpayers to believe that the student should bear a larger share of the cost of his education in order that appropriations of tax funds for collegiate instruction may be held constant.

In order that costs may be shared appropriately between the student and the state, the Commission recommends that the policy of the state on tuition rates in state collegiate institutions be to expect that income from tuition provide approximately 30 per cent of instructional costs as represented by direct and indirect expenditures for instruction and departmental research.

In effect, the Commission is reaffirming its 1969 policy recommendation on tuition and fees. Since variation among the three collegiate systems in the nature and amount of fees created some confusion over the 1969 policy, the above policy recommendation has been stated in terms of tuition only. The intent remains the same as the intent of the 1969 recommendation.

In making the policy recommendation on tuition, the Commission is fully cognizant of the fact that tuition rates providing 30 per cent of instructional costs could exclude some Minnesota residents from post-secondary education. Some Minnesota residents cannot afford to pay any tuition charges, and the costs of books and supplies, room and board, and incidental expenses would provide a serious barrier for some, even if no tuition were charged.

It is important to note that the Commission made its 1969 recommendation in light of action taken by the 1967 Legislature which established a state scholarship program providing financial assistance to able students who demonstrate financial need to cover the costs of tuition, fees, books and supplies. Concurrently with the 1969 recommendation on tuition and fees, the Commission recommended that appropriations for state scholarships be increased substantially and that a state grant-in-aid program providing assistance to needy students, regardless of ability level, be established by the 1969 Legislature.

Establishment of the state scholarship and grant-in-aid programs reflected recognition of the public interest in developing all of Minnesota's human resources and in making educational opportunities available to all Minnesota residents regardless of economic status. The Commission believes firmly that this interest must be protected and that all Minnesota residents must have a realistic opportunity to pursue post-secondary education.

As instructional costs continue to rise, tuition charges, reflecting a constant percentage of instructional costs, will increase, barring an increasingly larger number of Minnesota residents from post-secondary education unless student aids are readily available in sufficient amounts. On the other hand, reducing the percentage of instructional costs to be borne by student tuition would either impair the quality of education provided or require substantial additional increases in state appropriations for current operating costs of public post-secondary education institutions.

In view of the above, the Commission takes this action with full confidence that the 1971 Legislature will act favorably on the Commission recommendation for substantial increases in appropriations for state scholarships and grants. Increases in tuition without concurrent increases in student aids would not be in the best interests of Minnesota and its residents.

In making the policy recommendation that income from tuition should equal 30 per cent of instructional costs, the Commission is fully cognizant of the facts that (1) present data on instructional costs are not adequate, (2) subsidizing 70 per cent of instructional costs uniformly for students from families of all income levels may provide disproportionate benefits per tax contributions for some families, and (3) paying tuition equal to 30 per cent of instructional costs represents a much greater relative burden for some students than for others. Accordingly, the Commission proposes to devote major efforts during the next biennium to study of the costs and financing of post-secondary education in Minnesota.

X. IMPROVING THE BUDGETING PROCESS

As higher education continues to become more complex, improved bases for developing budget requests by the systems and making appropriations to the systems by the legislature are needed. This is a matter which needs continuing attention and one to which the Commission hopes to give greater priority during the next biennium. In the meantime, use of the bases suggested below will facilitate a more effective budgeting appropriation process for the 1971-73 Biennium. The chief executive officers of the three state higher education systems which submit legislative budget requests agreed to these bases in August of 1970.

The Commission recommends that requests for operating budgets and appropriations for the 1971-73 Biennium be made in accordance with the following common definitions and concepts:

1. *Work Load and Full-Time Equivalent Student Definitions.*

Credit hours are the most comparable and easily measured "proxies of production." In counting credit hours, the following conventions are to be used:

A. Credit hours are to be counted by level of instruction regardless of the level of student. In order to do this at the 100-199 course level at the University of Minnesota, which includes both graduate and undergraduate students, it is necessary to identify credit hours by level of student.

B. Extension and summer session credit hours are to be counted if the credits are acceptable in a regular academic instructional program and the faculty are included in the faculty entitlement formulas. These credit hours are to be separately identified in order to facilitate comparison with previous budget presentations. Appropriate workshop credit hours are included in the count for the state colleges.

C. Equivalent credit hour values are to be assigned to the work related to supervision of master's candidates writing a thesis and doctoral candidates. The credit hour equivalents for these master's and doctoral candidates are 18 credits for master's candidates and 40 credits for doctoral candidates.

D. The credit hour count is to be made as of the end of the second week of each quarter. Registered credit hours are to be counted whether or not fees have yet been paid.

E. Equivalent credit hours for graduate work included in the count are to be an estimate based in part on degrees awarded the previous fiscal year and in part on projections of change in numbers of degrees to be awarded.

The legislature has been accustomed to using some measure of student count as a measure of workload for budgetary purposes. If a concept of f.t.e. student count continues to be deemed useful, the following standard definitions are recommended in order to eliminate the confusion that has occurred in past presentations to legislative committees:

A. An f.t.e. undergraduate student (including first professional degrees in Pharmacy, Law, Medicine, Veterinary Medicine, and Dentistry) is defined to be 15 credit hours per quarter or 45 credit hours for the regular year.

B. An f.t.e. graduate student is defined to be 10 credit hours per quarter or 30 credit hours for the regular year.

RATIONALE

The average load for undergraduate students (both full-time and part-time) in the three public systems of higher education is slightly less than 15 credit hours per quarter. A divisor of 15 has been used for calculating an f.t.e. undergraduate student for budgetary purposes by the State College Board and Junior College Board for a number of years. The divisor of 15 is universally recognized as a reasonable measure for deriving an f.t.e. undergraduate student.

Based in part on the average load for first and second level graduate students (both full-time and part-time) at the University of Minnesota for fall quarter, 1969-70, which approximated nine credit hours, it is our judgment that a divisor of 10 is a reasonable measure for deriving an f.t.e. graduate student. Consideration was also given to the fact that credit hour loads for f.t.e. graduate students which approximate the results of the University analysis are recognized in other states.

The allocation convention for the 100-199 course level at the University is adopted because the level at which these courses are taught does, in fact, usually vary according to whether the student is a graduate or undergraduate. Typically, the graduate student is required to write one or more special term papers and in this and other ways, requires additional faculty effort. Coursework taken at this level divides fairly evenly between undergraduate and graduate credit hours. In this instance, it is necessary to use this method of counting because courses taken concurrently by graduates and undergraduates are not separately numbered.

The assignment of 18 equivalent credits for a master's degree with thesis is based on the fact that 45 credits are required for a master's degree without thesis while 27 credits are required for a master's degree with thesis. The assignment of 40 equivalent credits for a doctoral candidate is based on a judgment that the time required for completion of a dissertation project will normally be more than one academic year.

2. *Graduate Assistants as Full-Time Equivalent Faculty.*

An f.t.e. graduate assistant is defined to be four graduate assistants or the equivalent.

RATIONALE

The direct contributions to the institution's instructional enterprise of four, half-time graduate assistants may be approximately equated with the contributions of one, full-time regular faculty member. This results from the following factors:

—The graduate assistant ordinarily requires supervision from senior faculty, and is therefore a consumer of instruction from the regular faculty as well as a producer of instruction for students.

—The half-time graduate assistant works an average of 20 hours per week in performing his duties, and receiving supervision. This is well below 50 per cent of the average work week for regular faculty.

—The half-time graduate assistant is funded at approximately one-fourth the cost of the regular faculty member in recognition of the fact that he is receiving an internship experience in teaching, with supervision and instruction, and is therefore contributing approximately one-fourth of the services to students provided by the regular faculty member.

3. *Gross Square Footage Relative to Plant Operation and Maintenance.*

Gross square footage is defined to be the sum of the floor area included within the outside faces of exterior walls for all stories, or areas, which have floor surfaces.

RATIONALE

The use of gross square footage as one base for requesting funds for operation and maintenance of campus buildings is based on a judgment that the effects of various factors (such as age of building, size of building, type of construction, type of program, room utilization, etc.) can be compensated for with the use of this standard measure. Gross square footage as defined is the U. S. Office of Education definition.

4. *1971-73 Biennial Budget Format for Plant Operation and Maintenance.*

A program type budget for operation and maintenance of campus buildings and grounds is to be prepared for inclusion in the 1971-73 Biennial Budget. This presentation is to be in addition to the regular object of expenditure budget.

5. *Student-Faculty Ratios.*

Requests for teaching faculty positions will be based on one faculty member for the following numbers of full-time equivalent students at the various levels:

Level (and Cost Category)	Ratio of Full-Time Equivalent Students to Teaching Faculty Positions	
Lower Division: Standard	20	FYE$_{45}$**
Lower Division: High Cost*	*	FYE$_{45}$
Upper Division: Standard	16	FYE$_{45}$
Upper Division: High Cost*	*	FYE$_{45}$
Graduate I (including Pharmacy and Law Professional Programs)***	10	FYE$_{30}$ (or FYE$_{45}$)
Graduate II (including all professional and graduate programs in Dentistry, Medicine, and Veterinary Medicine)***	5	FYE$_{30}$ (or FYE$_{45}$)

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*To be determined and presented on an individual program area basis by each system.

**FYE=Full Year Equivalent.

***Graduate I includes all programs through the master's level. Graduate II includes all post-master's programs.

XI. PLANNING AND UTILIZING INSTRUCTIONAL RESOURCES COOPERATIVELY

The potential for higher productivity, improved quality, and greater economy is available to Minnesota post-secondary education through effective utilization of instructional resources. Failure to provide the potentially powerful instructional tools which have become available through technological advancement inhibits both the effectiveness and the efficiency of post-secondary education. On the other hand, providing full instructional resources at each post-secondary institution would require a substantially larger investment than could be justified. A solution to the problem of making adequate instructional resources available without unwarranted cost to the state can be achieved through cooperative planning and utilization of instructional resources.

The 1965 Legislature recognized the advantages of cooperative planning and utilization of instructional resources when it appropriated $150,000 for a feasibility study of inter-institutional television to be conducted by the University of Minnesota. Results of that study were reported to the 1967 Legislature in the *Report of the Minnesota Inter-Institutional Television Feasibility Study.*

The present Inter-Institutional Television Program is based upon the data and recommendations contained in the *Report of the Minnesota Inter-Institutional Television Feasibility Study.* The cost of implementing the recommendations of the feasibility study was estimated to be $2,712,134. The legislature in 1967 authorized an appropriation for a more limited program ($350,000) reducing the number of experimental regional television production centers from nine to two and providing seven experimental classroom television production units to be located at state-supported institutions of higher education.

The 1969 Legislature continued the statewide television program by appropriating $540,000 which provided for the establishment of the third regional production center and the initial implementation of the "inter-institutional development project" as recommended in the feasibility study. This provided support for developing instructional materials for the television media.

As instructional materials continue to be developed under the inter-institutional development project and the remaining regional production centers are established the state-wide television program can implement the next step recommended in the feasibility study which is to establish a pilot-model interconnection between several institutions to gain the needed experience in the exchange of communications signals. Although this system is needed to serve video transmission it could also be planned to gain experience in serving the library and computer communications needs of these institutions such as sharing of special library collections and for access to high speed computers.

The following recommendations for continuing the Inter-Institutional Education Television Program take cognizance of the progress made during the current biennium and provide for continuing the implementation of the recommendations contained in the feasibility study in priority order.

Regional Production Centers. *To continue to place production facilities in close proximity to educational resources and faculties, six additional production centers are to be established. The production centers serve the intra-institutional needs of the resident institution and those of the junior and private colleges, as well as to provide facilities for inter-institutional production. These centers are available to the elementary and secondary schools to the extent that the capability of the facilities permit.*

Inter-institutional Development Project. *To encourage the development of television materials on an inter-institutional basis, funds should be provided* *for the programming of such materials for broadcast and closed-circuit distribution. This project administered through the Higher Education Coordinating Commission will continue to make grants to institutions submitting proposals for the cooperative development of television courses related instruction and materials. The proposals would cover the institutions' additional costs for personnel and materials.*

Television Coordinator. *To work with institutions in acquainting faculty and administrators with the capabilities of television instruction and the procedures by which it can be used, a television coordinator should be provided at the state level. The person in this position needs to communicate what other institutions within the state and nationwide are doing in various aspects of television instruction. This person would need to encourage balanced development of television capability within the state and develop ways by which faculty members from various institutions can join in efforts to improve instruction via the use of television.*

Continuing Program of Research. *To maintain an on-going evaluation of inter-institutional television and to provide new information relative to improving instructional effectiveness, a continuing program of research should be established.*

Model Interconnection System. *To provide needed experience in the exchange of communications signals among several institutions of post-secondary education, a pilot project model interconnection system should be provided. This system could accommodate television and other educational communications activities between the University of Minnesota-Minneapolis, University of Minnesota-Morris, Southwest Minnesota State College, and Willmar State Junior College, and a similar connection between Mankato and Southwest State colleges.*

Implementation of these recommendations will require appropriations of $947,000 per year for Fiscal Years 1972 and 1973. A delineation of the proposed expenditures for each of these activities appears in Appendix K. A report on activities under the program during the present biennium is presented in Appendix L.

Results of a study recently completed by the Governor's Advisory Committee on State Information Systems which was conducted with assistance of a group of professional consultants suggest that the requirements of post-secondary education for computers to serve instructional purposes as well as research and administrative functions can be met through implementation of a master plan for cooperative planning and utilization of computers.[12] It is the judgment of the Commission that action by the 1971 Legislature implementing the recommendations in the "Computers and Information Systems in Higher Education" section of the study report would be an efficient approach to providing the computer capacity necessary for Minnesota post-secondary education.

The Commission adopts the following statements of general policy and approves the master plan of the Computers and Information Systems in Higher Education report on that basis:

All institutions and systems of higher education, prior to the development of their legislative requests, shall identify to the Higher Education Coordinating Commission their plans for computing for both facilities and for operating costs. These plans should provide detailed information on budgeted costs and program justification. The Commission shall review these proposals to determine how these plans are coordinated with the Master Plan—how they approximate the goals and where they deviate from them. The Commission shall prepare a Summary Report for each legislature on the progress that has been

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[12] Governor's Committee on State Information Systems, *Information Systems in the State of Minnesota, 1970-1980.*

made towards achieving the goals of the Master Plan. This Summary Report shall also include recommendations regarding the requests which are being submitted by the institutions and systems, and by the Commission itself.

For on-going, or operational, computing activities, the responsibility for planning and for preparing legislative requests shall rest with the individual systems of higher education. Funding will be appropriated to the individual systems.

The Computers and Information Systems in Higher Education *report identifies four programmatic areas of a developmental nature. These are:*

(a) a development center for Computer-Assisted and Computer-Managed Instruction.

(b) a statewide automated library system.

(c) within each biennium, a program of grants for projects in research and in development related to computing in higher education. (a continuation of an existing program)

(d) grants to private colleges in support of their computing activities. For these four developmental activities, the responsibility for planning shall rest with the Commission. For a grants-program (c and d above) the Commission will also prepare the legislative requests and receive the appropriations. For activities which involve both new facilities and operating support (a and b above), the legislative requests will be prepared jointly by the Commission and those individual systems which plan to make use of the facilities. Appropriations for the initial facilities will be made to the Commission; appropriations for operating costs associated with the developmental activities themselves will be made to the appropriate system or agency, including the Commission itself. The Commission shall assign management responsibility for the facility to another board or agency.

Adjustments in implementing plans presented to the legislature in accordance with procedures outlined in No. 1 above shall be subject to review by the Commission.

The Commission proposes to review periodically the effectiveness of the policies being adopted here and to make or recommend such changes as it deems advisable.

In order to facilitate immediate implementation of the master plan for computers in higher education, the Commission has reviewed budget requests for the 1971-73 Biennium. Recommendations regarding these requests are presented in Appendix M.

XII. COORDINATING AND PLANNING INSTRUCTIONAL PROGRAMS COOPERATIVELY

The 1969 Legislature requested that the Commission conduct a statewide curriculum study "directed toward cooperative planning and development of undergraduate instructional systems." A comprehensive study of all aspects of curriculum would require substantially larger resources than those available to the Commission. In order to undertake a curriculum project of manageable scope, the Commission focused its efforts on three curriculum concerns.[13]

First, the Commission conducted a general inventory and analysis of instructional programs being offered in Minnesota post-secondary institutions. This aspect of the study was concerned with determining the numbers and kinds of instructional programs being offered and how such programs are distributed geographically and among the several types of institutions with particular attention to existing program duplication and omission.

Second, the Commission initiated an experimental program review procedure for coordinating plans for establishing new instructional programs in all post-secondary institutions. Program review, a description of which appears in Appendix N, was intended to test the feasibility of coordinating expansion of statewide curriculum and to facilitate cooperative planning of such expansion by the several systems.

Third, the Commission studied the experience of transfer students. In this phase of the study, the Commission examined (1) student transfer patterns in order to assess compatibility among programs and (2) the success of students who transferred in order to determine whether or not programs are sufficiently compatible to permit transfer students to complete programs without serious loss of time and credit.

Findings of the Commission's curriculum study, which are summarized in Appendix O, have significant implications for curriculum planning. The need for continuing study, both to investigate those aspects studied in greater depth and to examine additional aspects of curriculum, is also demonstrated. Most of the findings do not indicate the need for legislative action pertaining to curriculum.

It should be noted that a large number of post-secondary education programs are offered in Minnesota—741 vocational and occupational programs are offered, 904 programs are offered at the baccalaureate level, 289 are offered at the master's level, and 78 doctoral programs are available. Even so, some omissions and deficiencies are apparent and the establishment of additional programs in some areas would constitute unwarranted duplication. The fact that more than 100 proposals for new instructional programs were submitted to the Commission by the four public systems during the past year indicates that Minnesota post-secondary institutions are responding readily to needs for new programs.

It also should be noted that students from state junior colleges generally did not experience difficulties in transferring to the senior institution of their choice, and all transfer credits usually were accepted by the senior institution. The finding that about 30 per cent of the students surveyed took more than four academic years to complete requirements for a bachelor's degree indicates the need for further study. While some of the delays in obtaining the degree may relate to problems of articulation between junior colleges and senior institutions, they may also relate to other factors, such as changes in degree or career objectives, improper planning and course selection, excessive employment in order to meet expenses, low academic ability, or a desire to continue in school longer than four years. Further study of the time required for completing a degree and the factors associated with extension in time, including comparisons for both transfer students and nontransfer students, is needed.

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[13] The complete study report, titled *Statewide Curriculum Study*, is reproduced separately.

Some voids in the geographical availability of programs reinforce the Commission's assessment of the need for those new institutions previously recommended by the Commission as discussed in Section IV of this report. In addition, the importance of adequate and effective guidance and academic advisement for successful transfer from a junior college to a senior institution emphasizes the need for the appropriation of sufficient funds for counseling services as recommended in Section III.

The large number and variety of new instructional programs being established by post-secondary institutions indicates a continuing need for coordinating planning for new programs. While several problems must be resolved and procedures must be refined as experience is gained, the potential benefits of program review have been demonstrated during the past year. Although program review is a time consuming process which will require fairly heavy investments of Commission time and resources in order to be effective, the Commission believes that the benefits of coordinating planning for new instructional programs justify this investment.

The Commission proposes to continue with program review and requests that the 1971 Legislature give appropriate statutory recognition to the Commission's responsibility for program review.

APPENDIX A

MINNESOTA HIGHER EDUCATION COORDINATING COMMISSION MAJOR REPORTS AND PUBLICATIONS THROUGH OCTOBER, 1970

LEGISLATIVE REPORTS:

1. *Report of the Minnesota Liaison and Facilities Commission for Higher Education for the period July 1, 1965 — September 30, 1966, October 1966*
2. *Report of The Minnesota Higher Education Coordinating Commission, October 1968*
3. *Proposal for Progress: Guidelines for State Policy and Comprehensive Planning of Post-Secondary Education, January 1969*
4. *Report of the Minnesota Inter-Institutional Television Program, January 1969*
5. *Information relevant to decisions on an Upper Division State College and a State Junior College in St. Paul, May 1970*
6. *Analyses and conclusions based on information relevant to decisions on an Upper Division State College and a State Junior College in St. Paul, May 21, 1970*
7. *Recommendations of the Minnesota Higher Education Coordinating Commission on New Institutions, September 1, 1970*

PLANNING REPORTS:

8. *Planning Report 1: A Philosophy for Minnesota Higher Education, March 1968*
9. *Planning Report 2: Population and Student Enrollments in Minnesota Higher Education, September 1968*
10. *Planning Report 3: Student Enrollments in Minnesota Higher Education, 1967-68, October 1968*
11. *Planning Report 4: Professional Personnel in Minnesota Higher Education, February 1969*
12. *Planning Report 5: Current Operating Revenues and Expenditures in Minnesota Higher Education, August 1969*
13. *Planning Report 6: A Facilities Inventory and Space Utilization Survey for Minnesota Higher Education Institutions, July 1970*

STUDENT ENROLLMENT-RELATED REPORTS:

14. *Fifteenth Annual Survey of Minnesota College and University Enrollments, Fall 1968, November 1968*
15. *Sixteenth Annual Survey of Minnesota College and University Enrollments, Fall 1969, November 1969*
16. *Seventeenth Annual Survey of Minnesota College and University Enrollments, Fall 1970, November 1970*
17. *Full-Time Equivalent Enrollment by Level in Minnesota Higher Education Institutions, Fall 1968, November 1968*
18. *Full-Time Equivalent Enrollment by Level in Minnesota Higher Education Institutions, Fall 1969, December 1969*
19. *Enrollments in Minnesota Public and Private Colleges and Universities, Winter 1969, February 1969*
20. *Enrollments in Minnesota Public and Private Colleges and Universities, Winter, 1970, February 1970*
21. *Enrollment in Minnesota Colleges, Universities and Area Vocational-Technical Schools, Spring 1969, April 1969*
22. *Enrollment in Minnesota Colleges, Universities and Area Vocational-Technical Schools, Spring 1970, June 1970*
23. *Enrollments in Minnesota Public and Private Colleges and Universities, First and Second Summer Session, 1969, August 1969*
24. *Enrollments in Minnesota Public and Private Colleges and Universities, First and Second Summer Session, 1970, August 1970*
25. *Changing Enrollment Patterns by Level in Minnesota Colleges and Universities, June 1970*
26. *Full-Time New Entering Freshmen, Undergraduate Students, Graduate Students, Seminary Students, and Total Students, in Minnesota Colleges and Universities, by County of Residence, Fall 1968, August 1969*
27. *Full-Time New Entering Freshmen, Undergraduate Students, Graduate Students, Seminary Students, and Total Students, in Minnesota Colleges and Universities, by County of Residence, Fall 1969, June 1970*
28. *Students Enrolled for Advanced Degrees in Minnesota Colleges and Universities, Fall 1968, August 1969*

29. *Students Enrolled for Advanced Degrees in Minnesota Colleges and Universities, Fall 1969, August 1970*

CONSULTANT REPORTS:

30. *Analysis and Recommendations Concerning the Expansion of Higher Education in Minnesota (Lewis B. Mayhew), April 1970*
31. *Minnesota Private Higher Education: An Assessment of the Present Status and Future Role of Private Higher Education in Minnesota (Earl J. McGrath, John D. Millet, Harry Ransom, Kenneth Thompson, and Robert Wert), (in press).*

MISCELLANEOUS AND BACKGROUND REPORTS:

32. *Rates of College Attendance in Minnesota, March 1970*
33. *Minnesota Post-Secondary Institutions: Institution Type, Student Body, Calendar System, Control/Affiliation, Location, and Year of Establishment, June 1970*
34. *Analyses of Library Data for Minnesota Higher Education Institutions, 1966-69, September 1970*
35. *Survey of Institutional Information for Minnesota Colleges and Universities, February 1969*
36. *Survey of Institutional Information for Minnesota Colleges and Universities, February 1970*
37. *Minnesota Rankings Among the States According to State Appropriations for Higher Education, April 1969*
38. *ACT Class Profile of Minnesota Public College Entering Freshmen and Area Vocational-Technical School-Bound Students, 1969, May 1970*
39. *Continuing Education in Minnesota, (in press)*
40. *Program Inventories of Area Vocational-Technical Schools, Colleges, and Universities in Minnesota, February 1970*
41. *Cooperative Efforts in Minnesota Two-Year Post-Secondary Occupational Programs, June 1970*
42. *Statewide Survey of Post-High School Plans and Vocational Choices of Minnesota Juniors, May 1970*
43. *Analysis of Plans of Minnesota Junior College Sophomores, April 1970*
44. *Transfer Experiences of Post-Secondary Students to Minnesota Area Vocational-Technical Schools and State Junior Colleges, May 1970*
45. *A Description of Two-Year Post-Secondary Programs in the 12-State Midwestern Area, December 1969*
46. *Minnesota Population Trends, Commission Preliminary Post-Secondary Enrollment Projections and Commission Estimates of Enrollment Potentials in Existing, Authorized, and Recommended Institutions, December 1969*
47. *Allied Health Education Programs in Minnesota, February 1970*
48. *The Number of Resident Births Occurring in Minnesota Counties from 1950 through 1969 with Number and Percentage of Births in 1969 Differing from Years of Maximum Number of Births, by County, August 1970*
49. *MSAT Student Profile of Minnesota High School Junior Students, June 1970*
50. *Degrees Conferred by Minnesota Colleges and Universities During the 1969-70 Academic Year, September 1970*

INFORMATIONAL BROCHURES:

51. *Guidelines for Program Review, December 1969*
52. *Minnesota State Scholarship and Grant-In-Aid Program for 1971: Information for Students, Counselors, Teachers, Parents, October 1970*
53. *Higher Education in the Solution of Community Problems in Minnesota (Title I, P.L. 89-329), January 1968*

APPENDIX B

AN ESTIMATE OF THE NEED FOR NON-FAMILY FINANCIAL SUPPORT OF MINNESOTA SECONDARY SCHOOL GRADUATES TO ATTEND A MINNESOTA COLLEGE OF THEIR CHOICE

Empirical evidence suggests great differences in the ability of Minnesota families to buy higher education for their children. But no definitive "yardstick" exists which can accurately measure the amount of non-family financial support needed to attain equal opportunity for higher education for our young men and women.

This treatise is an attempt to derive a fair and reasonable estimate of such need for financial assistance through an analysis of (a) the distribution of family income, (b) a family's ability to pay toward college costs from a given income and (c) current price tags on higher education by type of control.

a. The Percentage Distribution of Families by Income Level, 1967

Family Income	United States[1]	North Central[2]	Minnesota[3]
Less than $3,000........	12.3	11.0	8.4
$ 3,000— 4,999	12.8	11.6	11.2
5,000— 6,999	16.0	15.6	17.2
7,000— 9,999	24.2	26.4	25.8
10,000—14.999	22.5	23.8	23.3
15,000 and over	12.2	11.6	14.1
TOTALS	100	100	100
Median Income	$8017	$8255	$8534

[1] U.S. Bureau of the Census.

[2] Statistical Abstract of the U.S. — 1969; 90th Annual addition. U.S. Department of Commerce, Bureau of the Census

[3] Minnesota Department of Taxation, Income Tax Division.

b. Expected Parents' Contribution Toward College Expenses From Net Income Before Taxes[4]

Family Income	Group Median	1 Child	2 Child	3 Child	4 Child
Less than $3,000	$ 2,000	$ –0–	$ –0–	$ –0–	$ –0–
$ 3,000— 4,999	4,000	–0–	–0–	–0–	–0–
5,000— 6,999	6,250	600	250	–0–	–0–
7,000— 9,999	8,500	1,240	740	470	310
10,000—14,999	12,500	2,610	1,650	1,220	960
15,000 and over	20,000	5,400	3,840	2,920	2,360

[4] Source: Manual for Financial Aid Officers, 1969 Revisions — Table A. College Scholarship Service, College Entrance Examination Board, New York, 1970.

c. Representative Minnesota College Cost Budgets by Type of Control

Private 2 Year	Private 4 Year	Public 2 Year	Public 4 Year	U of M
$2,200	$3,100	$1,400	$1,700	$1,750

Each college cost budget includes:

- Tuition and mandatory fees charged all students.
- Book and supply alowance of $100.
- Room and board at the dormitory double room rate.
- Personal — clothing, laundry and dry cleaning, personal hygiene, transportation and reasonable recreation.

The weighted average cost for the freshman year of resident students entering Minnesota colleges in the fall of 1969 is obtained as follows:

College Control	No. Freshmen	% Distribution	Base Average Cost	Total Cost
Private 2 Year.....	488	1.4	$2,200	$ 1,073,600
Private 4 Year.....	7,639	22.7	3,100	23,680,900
Public 2 Year......	8,032	23.9	1,400	11,244,800
Public 4 Year......	8,697	25.9	1,700	14,784,900
U of Minnesota....	8,787	26.1	1,750	15,377,250
	33,643*	100	$1,965	$66,161,450

*52.6% of high school graduates, 1969.

Given the above data, it becomes necessary to make certain assumptions regarding the parameters of various distributions. For each level of income, families are distributed by size. Each additional child after the first increases basic maintenance costs but at a decreasing rate. The greater the number of children, given a level of income, the less parents can contribute to the costs of higher education for each of their children. Empirical evidence seems to indicate that parents in the lower income levels tend to have larger families than those in the upper income levels. However, in making this analysis, it is assumed that the size of family is normally distributed over the income range and that a family with two children, one of whom is in college, is most representative of all families seeking financial aid for their children.

Cultural, social and economic differences in families produce differences in health, motivation and general ability to achieve competitively in an academic environment. A higher proportion of the children in upper income families have a proclivity for academic achievement than those in lower income families. The college going rate of students varies significantly with variances in family income. Income difference is not the single factor influencing the college going rate. In this analysis, it is assumed that current patterns of college attendance with some modifications resulting from the availability of financial aid will most accurately assist in deriving an estimate of the need for non-family financial support for those expected to seek higher education.

The college going rate of Minnesota secondary school graduates in 1969 was about 52%. This rate is increasing annually. For this analysis it is assumed that approximately 55% of our secondary school graduates (64,000) will enter college. The proportion of these graduates who will go on to college will vary from 35% of those in the low income families to 85% in the upper income families. See Column 8, Schedule I.

With the data given and the assumptions made, the computation of the estimated amount of non-family financial support required for those Minnesota residents entering Minnesota colleges directly from secondary schools follows as shown in Schedule I.

If all secondary school graduates were to enter college, the need for non-family financial support would be $49,732,480 for the freshman year. For those expected to enter college, 55% of the secondary school graduates or 35,332 students, the need for non-family financial support is $21,655,845 for the freshman year.

To obtain the total outlay for college attendance by those expected to go, multiply the number of students, 35,322, by the weighted average cost, $1,965 — $69,407,730. Of this amount, families can provide $47,751,885 or approximately 70%. If these students are to have fair and reasonable access to higher education at the school of their choice, 30% of total expenditures must be provided by non-family sources.

In our analysis, we find that students from families with income below $5,000, comprising 13.4% of those expected to enter college, if funds were available, would require full support. Students from families with income below $10,000, comprising 50.8% of those expected to enter college, would require partial or full support, according to family resources.

These findings are substantiated by a study conducted by the College Entrance Examination Board in May, on *Admissions of Minority Students in Midwestern Colleges** which showed:

1 — 48% of all freshmen students in 1969 needed partial aid and 13% needed full aid to attend college.
    a — in "public selective" institutions, 43% needed partial aid and 13% needed full aid.
    b — in "public non-selective" institutions, 41% needed partial aid and 10% needed full aid.
    c — in "private" institutions, 57% needed partial aid and 15% needed full aid.
2 — 80% of all "minority" freshmen students in 1969 needed partial aid and 41% needed full aid.

No full and accurate information is currently available on the amount of non-family financial support now provided by colleges, foundations, industry, service clubs, labor unions, and the federal government. It is known that all available student financial aids are fully utilized. Large numbers of students are forced to spend more time in term-time employment than they should and that often excessive loan obligations are incurred to obtain an education.

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*Study covered 129 colleges and universities, public and private, from Illinois, Iowa, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, West Virginia, Wisconsin.

Computation of the Need for Non-family Financial Support for Minnesota Residents to Attend a Minnesota College During the Freshman Year—Two Child Family, One in College.

Schedule I	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
					Family Income Distribution			Expected Rate of College Attendance of Group			
Family Income	Group Median	Expected Family Resources	Weighted Average Coll. Cost	Estimated Median Family Need	% of F	N of F	Estimated Total Need of Group	% of G	N of G	Cum. %	Est. Need of College Freshmen
		(*)		(3-2)			(4x6)		(6x8)		(4x9)
Under $ 3,000	$ 2,000	$ 350	$1,965	$1,615	8.4	5,376	$ 8,682,240	35	1,882	5.3	$ 3,039,430
$ 3,000- 4,999	4,000	350	1,965	1,615	11.2	7,168	11,576,320	40	2,867	13.4	4,630,205
5,000- 6,999	6,250	600	1,965	1,365	17.2	11,008	15,025,920	45	4,954	27.5	6,762,210
7,000- 9,999	8,500	1,090	1,965	875	25.8	16,512	14,448,000	50	8,256	50.8	7,224,000
10,000- 14,999	12,500	2,000	1,965	–0–	23.3	14,912	–0–	65	9,693	78.3	–0–
15,000 and over	20,000	4,190	1,965	–0–	14.1	9,024	–0–	85	7,670	100.0	–0–
TOTALS					100	64,000	$49,732,480		35,322		$21,655,845

*Obtained by adding $350 of expected summer savings by student to expected contribution by parents. See b.

APPENDIX C

MINNESOTA STATE SCHOLARSHIP PROGRAM

	1968			1969				1970 Revised*		
Funds	$250,000			$330,135				$460,000		
No. Applications	5,468			5,427[1]				6,439[2]		
Winners—Men	260	(36%)		315	(36%)			436		
Women	454	(64%)		554	(64%)			774		
Total	714			869				1,210		
Winners—Monetary	417	(58%)		516	(59%)			723	(60%)	
Honorary	297	(42%)		353	(41%)			487	(40%)	
Average Monetary Award	$ 600			$ 640				$ 636		
No. Awards	714			869				1,210		
Public 2-Year	25	(3%)		27	(3%)			35	(3%)	
Public 4-Year	366	(51%)		445	(51%)			605	(50%)	
Total Public	391	(54%)		472	(54%)			640	(53%)	
Private 2-Year	2	(.28%)		1	(.11%)			4	(.33%)	
Private 4-Year	321	(45%)		396	(45%)			566	(47%)	
Total Private	323	(46%)		397	(46%)			570	(47%)	
			Avg. Award			Avg. Award	Avg. Award			Avg. Award
Dollars Awarded	$250,000			$330,135				$460,000		
Public 2-Year	$ 3,800	(1%)	$345	$ 4,850	(1%)	$404	$400	$ 9,300	(2%)	$400
Public 4-Year	77,400	(31%)	418	109,710	(33%)	499	524	147,200	(32%)	520
Total Public	$ 81,200	(32.5%)	$414	$114,560	(34%)	$494	$514	$156,500	(35%)	$511
Private 2 Year	$ 650	(.26%)	$650	$ 800	(.24%)	$800	$800	$ 3,675	(.80%)	$800
Private 4-Year	168,150	(67%)	764	214,775	(65%)	758	749	299,825	(64%)	740
Total Private	$168,800	(67.5%)	$764	$215,575	(66%)	$760	$749	$303,500	(66%)	$740

*Funds Include: Appropriation of $300,000, unused renewal funds of $153,000 and carry-over balance of $7,000.

[1] Scholarship applicants only.

[2] Combined Scholarship and Grant applicants.

APPENDIX C (Cont.)

MINNESOTA STATE GRANT-IN-AID PROGRAM

Initial Awards—Comparison Table

	1969		1970	
Funds	$200,000		$450,000*	
No. Applications	1,800[1]		6,438[2]	
Recipients—Men	150	40%	341	44%
Women	217	60%	435	56%
Total	367		776	
Number of Awards				
Public 2-Year[3]	54	14.42%	94	12.2%
Public 4-Year	230	62.87%	538	69.5%
Total Public	284	77.29%	632	81.7%
Private 2-Year	2	0.54%	9	1.1%
Private 4-Year	72	19.47%	111	14.8%
Total Private	74	20.01%	120	15.9%
Area Vocational-Technical[4]	1	0.27%	0	0.0%
Hospital Para-Medical[5]	8	2.43%	22	2.4%
Total Non College	9	2.70%	22	2.4%
Total	367	100.0%	776	100.0%
Dollars Awarded	$200,000		$450,000	
Public 2-Year[3]	$ 23,600	11.42%	$ 43,150	9.6%
Public 4-Year	111,925	55.96%	298,500	66.3%
Total Public	$135,525	67.38%	$341,700	75.9%
Private 2-Year	$ 1,550	0.77%	$ 6,750	1.5%
Private 4-Year	57,050	28.92%	88,600	19.7%
Total Private	$ 58,600	29.69%	$ 95,350	21.2%
Area Vocational-Technical[4]	$ 550	0.27%	$ 0	0%
Hospital Para-Medical[5]	5,325	2.66%	12,950	
Total Non College	$ 5,875	2.93%	$ 12,950	2.9%
Total All Institutions	$200,000	100.0%	$450,000	100.0%
Average Award	$ 545		$ 580	
Public 2-Year[3]	$ 441		$ 459	
Public 4-Year	488		554	
Total Public	$ 477		$ 541	
Private 2-Year	$ 775		$ 750	
Private 4-Year	792		798	
Total Private	$ 792		$ 794	
Area Vocational-Technical[4]	$ 550		$ 0	
Hospital Para-Medical[5]	$ 666		$ 589	
Average All Institutions	$ 545		$ 580	

NOTES:

[1] Applications for Grant-in-Aid only 1,006, previous 1969 applications included 794.

[2] All applications for 1970 are reviewed for Grant if not awarded Scholarship.

[3] Includes University of Minnesota-Crookston campus.

[4] No awards to students at Area Vocational-Technical Schools if under age 20 due to free tuition.

[5] Includes Hospital R. N. and L. P. N. Nursing Programs and physical therapy and radiologic therapy.

*Includes—$400,000 legislative appropriations.
$43,000 unused funds for 1969 renewals
$7,000 carry-over balance

APPENDIX D

ILLUSTRATION OF THE IMPACT OF THE PROPOSAL TO CHANGE STATUTORY AWARD LIMITS FROM $200-$800 TO $100-$1000

Rationale: Since the inception of the State Scholarship Program for the 1968-69 academic year, institutional costs have risen markedly. This has had a significant effect upon award levels by institution and has diminished the spread of allowable awards between the public and private college systems. Projections of future tuition increases will further reduce differences in award *levels* between the systems.

Illustration: College Costs 1968 to 1970

	1968		1969		1970	
	Total Cost*	Max Award	Total Cost*	Max Award	Total Cost*	Max Award
St. Olaf	3,000	800	3,300	800	3,650	800
University of Minnesota	1,700	475	1,800	600	2,000	600
State College	1,500	400	1,600	450	1,800	525
State Junior College	1,400	350	1,500	425	1,700	450

*Total Costs for education include the following four items:

1. Tuition and mandatory fees assessed all students.
2. Book and Supply Allowance of $100.
3. Room and Board—average rate for double room in a dormitory or $400 less than this if student is a commuter to allow for commuting and food expenses.
4. Personal expenditures (clothing, personal hygiene items and minimal vacation expenses.)

Summary: The primary reason which may be cited for lowering the minimum allowance to $100 from $200 is that the Commission could then deal equitably with those applicants whose preference is for a curriculum offered in one of the Area Vocational-Technical Schools. Under present legislation, the Commission is required to list the Area Vocational-Technical Schools as eligible institutions for participation in the Grant-in-Aid Program and accept applications from students who wish to attend these schools. However, we may not offer any sort of financial assistance to those students who are under the age of 21 even though they may fall within the category of the neediest of our applicants. In terms of actual expenditures for supplies, the cash outlay for a student in several of the curriculums offered at the Area Vocational-Technical Schools far exceeds the $100 allowance. It is safe to say that it would exceed actual cash outlay experienced by college students for books.

Institutional cost figures for students attending Area Vocational-Technical Schools are comparable to costs for attendance at the State Junior Colleges less the tuition or $950 per nine months for a commuter and $1,350 for a student who must live away from home.

Therefore, to allow an award of $100 for supplies to a student under age 21 at an Area Vocational-Technical School is only placing these students on an equal plane with those who opt for college attendance. The argument that these students already are subsidized through free tuition, should not bar their being afforded equality in regard to supplies. Presently, these students are placed at a disadvantage; removal of this handicap should be a prime area of concern for this Commission.

The last aspect of this problem is one of public relations. Because an insignificant number of our applicants are 21 or over, we are offering something to these individuals that we cannot in fact produce. Segments of the educational community are very disturbed over this unequal treatment of Area Vocational-Technical School bound students. These students apply on the basis of our listing of their school choice on our eligible list only to be told we are prohibited from offering them an assistance. Therefore, it is only logical to follow one of two alternatives:

1. Lower the minimum award to $100, or
2. Delete the Area Vocational-Technical Schools from the list of eligible institutions so as to cease creating false expectations among secondary school counselors and students.

Arguments may be raised that lowering the award to a $100 minimum would produce a large number of these awards and dilute the effectiveness of the program. An actual count indicates that had this $100 level been in effect for 1970-71, eight awards in the range of $100-$175 could have been offered to those with minimal needs.

APPENDIX E

ILLUSTRATION OF THE IMPACT OF THE PROPOSAL TO CHANGE THE STATUTORY LIMITS OF AWARDS

Eliminate the function of tuition, fees and book allowance to control award limits. Amend the current legislation to change the limits to a formula reading: The maximum award shall not exceed one half of the applicant's demonstrated need or $1,000, whichever is the lesser. The minimum award shall be $100 determined by this formula.

Rationale: As the Minnesota State Scholarship Program presently functions, monetary scholarships may be offered to students with minimal need. Where the need is greatest, only a small portion of this need can be met with State Scholarships. The proposed change would require the families of applicants who demonstrate minimal need or no need at lower cost institutions to participate in the consequences of deciding to attend higher cost institutions. When the demonstrated need of a student to attend an institution of his choice is equal to or exceeds twice the maximum award permissible, this change would not affect the amount of the award.

Therefore, where the need is the greatest, the Scholarship Program would be more adaptable to the needs of individual students than it is at present. This formula would operate particularly well for the Grant-in-Aid Program where we are dealing only with families with little or no resources for the education of their children.

Illustration: Three hypothetical families, distinguished only by income. All families assume 2 children, one in college, one parent employed. Assume even distribution, male and female.

	Family Income	Dep. Children	Parent Contribution	Total Family Resources
Student A	$ 6,000	2	$ 0	$ 350
Student B	8,500	2	740	1,090
Student C	15,000	2	2,360	2,710

Award level $100-1000—Assume student lives away from home.

Present System—Assume Student A chooses between Systems.

Student	College Choice	Family Income	Parent Cont.	Total Resources	College Cost	Unmet Need	Present Award Limit	Proposed Award Limit with Change #2
A	State JC	$ 6,000	$ 0	$ 350	$1,700	$1,350	$450	$ 675
	U of Minn.	6,000	0	350	2,000	1,650	600	825
	Gustavus Adol.	6,000	0	350	3,350	3,000	800	1,000
B	State JC	8,500	740	1,090	1,700	610	450	300
	U of Minn.	8,500	740	1,090	2,000	910	600	450
	Gustavus Adol.	8,500	740	1,090	3,350	2,260	800	1,000
C	State JC	15,000	2,360	2,710	1,700	0	0	0
	U of Minn.	15,000	2,360	2,710	2,000	0	0	0
	Gustavus Adol.	15,000	2,360	2,710	3,350	640	625	300

Summary: Adoption of this proposal will alter the amount of the awards made to individuals when compared with the present system. Under present regulations we are able to offer only token assistance in relation to measured need of families who are beneath the median level in income. For those families comfortably above the median income level, we are offering assistance to those who are least in need of such help. The net effect of current legislation is to force those families with the least resources and access to financial institutions, to borrow burdensome amounts to augment token gift assistance.

This proposal does operate negatively for families whose incomes are comfortably above the median level. However, the needs analysis procedures make allowances for unusual circumstances such as a large number of children or heavy medical expenses. In such cases, the ability of the family to provide funds for education is diminished and awards could be accordingly larger.

An analysis of possible effects upon awards was made with the very top group of scholarship award winners (Selection Score 198) from the 1970 Program. Assuming that Proposal #1 to change the limits was adopted and that Proposal #2 to change the basis of awards was adopted:

	No. Awards Increase	No. Decrease	No. No Change
Public Colleges	10	15	1
Private Colleges....	33	34	1

The average increase would be about $175 and the average decrease about $140.00.

APPENDIX F

OHIO HIGHER EDUCATIONAL FACILITY COMMISSION

Program of Loans
for
Higher Education Facilities
at
Private Colleges and Universities

OHIO HIGHER EDUCATIONAL FACILITY COMMISSION

OHIO HIGHER EDUCATIONAL FACILITY COMMISSION

Introduction

The Ohio Higher Educational Facility Commission is a state administrative agency created to assist privately sponsored colleges and universities in building needed facilities at a lower interest cost than might otherwise be available to them. The Commission does *not* make any facility grants, and has access to capital improvement funds only through borrowing. All borrowed funds obtained by the Commission must be repaid through rentals charged the participating college or university.

The Ohio Higher Educational Facility Commission was created by Senate Bill No. 453 of the 107th General Assembly which became law on March 8, 1968. This legislation enacted Chapter 3377 of the Ohio Revised Code. The Commission is a body politic and corporate, constituting an agency or instrumentality of the State of Ohio. The Commission was established to enhance educational opportunities for the people of the state by providing educational facilities for private colleges and universities.

The academic and other facilities built by the Ohio Higher Educational Facility Commission must be financed by the sale of revenue bonds by the Commission. In turn, the Commission will have to enter into lease agreements whereby a college or university will pay rent to the Commission in the amount needed to retire the Commission's debt.

Since the Commission is an agency or instrumentality of the State of Ohio, the interest paid by the Commission to the bond holders is exempt from federal government income tax under present provisions of law. Bonds providing income tax free interest normally sell on the market at a lower rate of interest than other bonds.

The use of the financing arrangements for facility construction made possible by the existence of the Ohio Higher Educational Facility Commission is entirely voluntary. No private college or university is required to enter into agreement with the Commission. The Commission desires to assist private colleges and universities to the extent each institution wishes to take advantage of its services.

The Commission

The Commission is comprised of nine members, one of whom is the Chancellor of the Ohio Board of Regents and eight of whom are appointed by the Governor with the advice and consent of the Ohio Senate. The original Commissioners are: David J. Young, Chairman, John A. Lloyd, Jr., Louis B. Seltzer, John J. Carrigg, Rembert E. Stokes, James P. Griffin, Senator John R. Longsworth, Jerome M. Jacobson, and John D. Millett, Chancellor of the Ohio Board of Regents. Members of the Commission receive no compensation for their services.

Eligible Colleges

Educational institutions for whose use educational facilities may be provided under the law are defined as educational institutions organized not for profit and holding an effective certificate of authorization issued under Section 1713.02 of the Revised Code. These are private colleges and universities and other institutions offering instruction in recognized academic and professional fields of study and awarding degrees for fulfilling requirements involving the equivalent of at least four semesters or six quarters of academic work beyond high school, and which, pursuant to standards prescribed by the Ohio Board of Regents under Section 1713.03 of the Revised Code and in Ohio Board of Regents' Rule R.G.-1-08, have been issued an effective certificate of authorization by the Ohio Board of Regents for the award of one or more types of degrees. Such eligible institutions do not include publicly owned colleges, universities, and institutes created under Chapter 33 of the Ohio Revised Code, nor any institution whose principal educational activity is preparing students for or granting degrees, diplomas, or other marks of proficiency which have value only in religious or ecclesiastical fields.

Eligible Projects

Eligible projects include any building, structure, facility, equipment, machinery, utility, improvement, or site and furnishings "to be used for or in connection with the conduct or operation of an educational institution, including *but not limited to,* classrooms and other instructional facilities, laboratories, research facilities, libraries, study facilities, administrative and office facilities, museums, gymnasiums, campus walks, drives and site improvements, dormitories and other suitable living quarters or accommodations, dining halls and other food service and preparation facilities, student services or activity facilities, physical education, athletic and recreational facilities, theatres, auditoriums, assembly and exhibition halls, greenhouses, agricultural buildings and facilities, parking, storage and maintenance facilities, infirmary, hospital, medical, and health facilities, continuing education facilities, communications, fire prevention, and fire fighting facilities, and any one, or any combination of the foregoing, whether or not comprising part of one building, structure, or facility." Facilities used for sectarian instruction or study or as a place for devotional activities or religious worship are not eligible projects.

Prior to the sale of any bonds or notes for a project, the Commission must determine that the project will contribute to the objectives stated in Section 3377.02 of the Revised Code, and that the educational institution admits students without discrimination by reason of race, creed, color, or national origin.

Section 3377.02 reads as follows:

"Sec. 3377.02. There is hereby created the Ohio higher educational facility commission for the purpose of enhancing the educational opportunities of the people of the state, thereby promoting the employment opportunities, economic welfare, public health and general welfare of the people, and for the purpose of alleviating the pressing demands upon tax supported colleges and universities by encouraging the means of instruction through provision for educational facilities at [private] educational institutions in the manner provided in Chapter 3377. of the Revised Code."

Allowable Project Costs

Project costs financed through the issuance of revenue bonds of the Commission may include costs of acquiring, constructing, equipping, furnishing, reconstructing, remodeling, renovating, enlarging and improving educational facilities comprising one or more projects, including costs connected with or incidental thereto, provision of capitalized interest prior to and during construction and for a period after the completion of the construction, appropriate reserves, architectural, engineering, financial, and legal services, and all other costs of financing, and the repayment or restoration of moneys borrowed or advanced for such purposes or temporarily used therefor from other sources. Under the law it is possible to finance 100% of the project costs.

Bonds and Notes

The revenue bonds are bonds of an instrumentality of the State of Ohio, but are payable solely from the rentals or other moneys derived from the lease, rental, sale, or other disposition of the pledged facilities (one or more projects), and may also be paid from any gifts or grants received with respect to the project financed. In most instances the bonds will also be secured by a mortgage on the project and its site, under a trust indenture with a corporate trustee. Satisfactory marketing of the bonds may require provision for a reserve to pay the principal and interest and a reserve to provide for maintenance and repair of the project, which reserves might be built up over a period of years by additional lease rental payments or may be funded as part of the bond issue.

The bonds must mature in not exceeding fifty years from the date of their issuance, but in most instances satisfactory marketing of the bonds will probably entail somewhat shorter maturities, generally from twenty-five to forty years.

Building Requirements and Tax Exemption

The real and personal property acquired for or comprising a project and the construction of the project are subject to or exempt from ad valorem, sales, use, and franchise taxes, and subject to or exempt from zoning, planning and building regulations and fees, to the same extent and in the same manner as if the college had acquired, constructed and equipped the project and owns it. For purposes of the property tax exemption provisions of Section 5709.07 and 5709.12 of the Revised Code, the property is deemed to be the property of and to be connected with the educational institution and not as being a leasehold estate nor as being used with a view to profit by reason of the lease from the Commission or by reason of charges made for or the rental or other payments to the Commission.

While the project must be constructed in accordance with applicable building and zoning requirements, the Commission does not prescribe architectural design or building standards. Obviously, both the college and the Commission will want to be assured that the useful life of the building will be at least equivalent to the life of the bond issue.

Project Site

While the project site can be financed through the bond issue, ordinarily it will be previously owned by the college. In appropriate circumstances a college which has the qualifications prescribed in Section 3333.08 of the Revised Code may acquire the site through eminent domain upon approval by the Ohio Board of Regents. It will be necessary that good title to the site be conveyed to the Commission prior to execution of the lease. In order to ensure marketability of the bonds, the site should be adequate to the purposes or potential uses of the building and should either abut upon a public street or road or be accompanied by appropriate easements of access thereto.

Lease

The lease-back to the college will be in the nature of a net lease placing all responsibility for operation, maintenance, repair and insurance, and the payment of all expenses and charges connected therewith, on the college. The lease rental must, of course, be adequate to pay principal and interest on the bonds. The lease rental may also temporarily require additional amounts to build up reserves for the payment of principal and interest and for maintenance and repair of the project, if such reserves are required by the trust indenture and are not funded from the bond proceeds. These requirements will be specifically identified in dollar amount before the college need commit itself under the lease agreement. In addition, or as an alternative, depending upon requirements for satisfactory bond marketing, provision may be made under the lease for the college to create an escrow fund with the trustee to assure timely payment of lease rentals.

The lease term would be at least for the life of the bond issue. Provision will, however, be made for the college to acquire title and ownership of the project and its site when the bonds have been retired or earlier provision made for their retirement. This will likely be done by way of an option to the college which may be exercised upon bond retirement by notice and payment of a small sum, or prior to bond retirement by payment of an amount adequate to retire the bonds.

Under the lease, provision will be made to permit inspection of the project by the representative of the Commission, and for annual reports by the college to the Commission, to assure compliance with the lease terms.

Planning and Construction

Broad flexibility with respect to planning and construction is permitted under the law. Technically, the architects' contract and the construction and equipment contracts will be those of the Commission. It will, however, be permissible that the lease contain provision under which the college would enter into these contracts as agent for the Commission. The architects, engineers and contractors will be such as are acceptable to the college and the Commission. All contracting documents must be approved by counsel designated by the Commission, and will be let in manner satisfactory to the college and the Commission. With the broad flexibility permitted, it is contemplated that procedures satisfactory to the college will be employed, provided they adequately assure expeditious completion of the project in accordance with the plans and specifications.

College Housing Loan Program and Higher Education Facilities Act

In appropriate circumstances, the Commission may, at the request of the college, make application for, or assume the position of applicant under, a loan under the College Housing Loan Program administered by the United States Department of Housing and Urban Development, or under Title III of the Higher Education Facilities Act administered by the United States Office of Education. This might be beneficial where funds necessary for a project are not fully available under federal grants and loans and where the additional sums required are to be borrowed from private lenders and investors. In such circumstances, both the bonds to be purchased by the United States and those to be sold to private investors could be issued under a single trust indenture of the Commission and thereby secured equally by a pledge of the rentals from and a mortgage on the project.

General Procedures

Substantial variations in procedures and in the lease, bond resolution, trust indenture and related documents are permitted by the law. The general procedures as noted below are largely by way of illustration. Variations likely will be involved in particular projects, and the Commission may, with further experience, determine the advisability of different procedures.

1. It generally will be advisable that the college communicate with the Commission at an early stage in the planning of a project. No form of application has been promulgated by the Commission, but original presentation to the Commission should involve information and data as to the nature and scope of the project, present estimates as to the cost, site availability, college finances and the ability of the college to provide adequate rentals and security, the eligibility of the college, the eligibility of the project, need for the project and how it will contribute toward achievement of the objectives set forth under Revised Code Section 3377.02 quoted above. The Commission will review such information and data with the assistance of a financial advisor or underwriter satisfactory to it, and bond counsel designated by the Commission, to determine economic and legal feasibility of the project.

2. Upon favorable preliminary determination the Commission will proceed in conjunction with the college, bond counsel and financial advisor or underwriter to develop the lease agreement, bond resolution, trust indenture, deed for site conveyance and other relevant documents. In some circumstances a preliminary agreement may be entered into between the college and the Commission pending preparation of the definitive documents.

3. Following their preparation, the applicable documents will be approved by the college and the Commission, with appropriate formality.

4. All steps to this point will look forward to a "closing" wherein, at one time, title to the project site will be conveyed to the Commission, the lease will be executed and delivered, and the bonds will be delivered.

5. From the bond proceeds a construction fund will be created in the hands of the Trustee, and provision will be made under the lease agreement and trust indenture for the investment and for the application of such construction fund to the payment of project costs, including reimbursement to the college of project costs previously expended by it, upon approvals by designated representatives of the college and the Commission to the effect that such payments are within the allowable project costs provided under the lease and trust indenture.

APPENDIX G

SUPPORTING DATA—PRIVATE COLLEGE RECOMMENDATIONS

TABLE I: PRIVATE COLLEGE ENROLLMENT IN MINNESOTA, PROJECTED IF NO CHANGE IN STATE FUNDING

Year	Private 2-Year Enrollment	Minnesotans Enrolled	Per Cent Minnesotans	Private 4-Year Enrollment	Minnesotans Enrolled	Per Cent Minnesotans	Total Private Enrollment	Minnesotans Enrolled	Per Cent Minnesotans
1971	1,233	919	74.5	29,603	16,874	57.0	30,836	17,793	57.7
1972	1,259	938	74.5	30,215	17,223	57.0	31,474	18,161	57.7
1973	1,284	957	74.5	30,828	17,572	57.0	32,112	18,529	57.7
1974	1,310	976	74.5	31,440	17,921	57.0	32,750	18,897	57.7

TABLE 2: PRIVATE COLLEGE ENROLLMENT IN MINNESOTA PROJECTED IF STATE SUPPORT IS PROVIDED ON THE BASIS OF $400 FOR EACH NEW 2-YEAR MINNESOTA ENROLLEE AND $500 FOR EACH NEW 4-YEAR MINNESOTA ENROLLEE

Year	Private 2-Year Enrollment	Minnesotans Enrolled	Per Cent Minnesotans	Private 4-Year Enrollment	Minnesotans Enrolled	Per Cent Minnesotans	Total Private Enrollment	Minnesotans Enrolled	Per Cent Minnesotans
1971	1,273	959	75.3	30,563	17,833	58.3	31,836	18,792	59.0
1972	1,339	1,017	75.9	32,135	19,143	59.5	33,474	20,160	60.2
1973	1,404	1,077	76.7	33,708	20,451	60.6	35,112	21,528	61.3
1974	1,470	1,136	77.2	35,280	21,760	61.6	36,750	22,896	62.3

TABLE 3: REQUIRED FUND TRANSFERS BASED ON TABLE 2

Year	2-Year New Minnesotans Enrolled	Fund Transfer Private 2-Year	4-Year New Minnesotans Enrolled	Fund Transfer Private 4-Year	Total New Minnesotans Enrolled	Fund Transfer Total
1971	59	$ 23,600	1,309	$ 654,500	1,368	$ 678,100
1972	117	$ 46,800	2,619	$1,309,500	2,736	$1,356,300
1973	177	$ 70,800	3,927	$1,963,500	4,104	$2,034,300
1974	236	$ 94,400	5,236	$2,618,000	5,472	$2,712,400
TOTAL		$235,600		$6,545,500		$6,781,100

TABLE 4: FUND TRANSFERS RESULTING FROM A $400 COST OF EDUCATION GRANT FOR EACH GRANT-IN-AID STUDENT IN THE PRIVATE 2-YEAR INSTITUTIONS AND $500 FOR EACH GRANT-IN-AID STUDENT IN THE PRIVATE 4-YEAR INSTITUTIONS[1,2]

Year	Estimated 2-Year Grant-in-Aid Enrollees (×$400)	Required Fund Transfer	Estimated 4-Year Grant-in-Aid Enrollees (×$500)	Required Fund Transfer	Total Estimated Grant-in-Aid Enrollees	Total Fund Transfer
1971	17	$ 6,800	254	$ 127,000	271	$ 133,800
1972	57	$ 22,800	841	$ 420,500	898	$ 443,300
1973	97	$ 38,800	1,428	$ 714,000	1,525	$ 752,800
1974	137	$ 54,800	2,015	$1,007,500	2,152	$1,062,300
TOTAL		$123,200		$2,269,000		$2,392,200

[1] This proposal is to be considered in conjunction with Tables 2 and 3.
[2] Assumes favorable action on the Commission's Student Aid requests.

TABLE 5: COMPOSITE FUNDING REQUIREMENTS-CONTRACT COSTS AND GRANT-IN-AID SUBSIDY

Year	New Student Contract Fund Requirement	Grant-in-Aid Subsidy Fund Requirement	Total Fund Transfer
1971	$ 678,100	$ 133,800	$ 811,900
1972	$1,356,300	$ 443,300	$1,799,600
1973	$2,034,300	$ 752,800	$2,787,100
1974	$2,712,400	$1,062,300	$3,774,700
TOTAL	$6,781,100	$2,392,200	$9,173,300

APPENDIX H

MINNESOTA-WISCONSIN HIGHER EDUCATION AGREEMENT

Basic elements of the Minnesota-Wisconsin Higher Education Reciprocity Agreement, as adopted by the Wisconsin Coordinating Council for Higher Education and the Minnesota Higher Education Coordinating Commission and approved by the Minnesota State Junior College Board, State College Board, and University of Minnesota Board of Regents, are as follows:

1. *Duration of the Agreement.* The plan to be implemented under the agreement would be regarded as an experimental step that will provide experience to be taken into account in formulating a permanent agreement. This agreement will become effective at the beginning of the 1969 summer sessions of the institutions involved and will be reviewed at the end of the second year.

2. *Scope of the Plan—Students.* All undergraduate students whose place of residence is within 35 miles of the Minnesota-Wisconsin border would be covered by the agreement, regardless of the program or level for which the student is enrolled or wishes to be enrolled. The sending state would determine the residency status of persons living in that state.

3. *Scope of the Plan—Institutions.* All state-controlled, higher education institution campuses, except vocational schools, which are located within 35 miles of the border would be covered by the agreement without regard for type of institution. Students attending an institution across the state line would be permitted to participate in this compact provided they attend an institution which is not more than 40 miles from their place of residency. The coordinating agency in the sending state would determine the eligibility of students with regard to the distance factor.

4. *Purpose and Nature of the Plan.* The purpose of the agreement would be to improve the availability and accessibility of higher education opportunities for those Minnesota and Wisconsin residents who are eligible. This will be accomplished by granting entrance to institutions of the neighboring state according to the same terms and conditions which govern entrance to those same institutions by residents of the state which controls those institutions. A Minnesota resident who resides in the area specified under the agreement could attend any Wisconsin institution which is located within the area specified under the agreement on the same basis as any Wisconsin resident can attend that same institution. A Wisconsin resident who resides in the area specified under the agreement could attend any Minnesota institution which is located within the area specified under the agreement on the same basis as any Minnesota resident can attend that same institution. The Minnesota resident would be required to meet those admission and performance requirements which are applicable to Wisconsin residents, and the Wisconsin resident would be required to meet those admission and performance requirements which are applicable to Minnesota residents. Those charges for tuition and fees which apply to Minnesota residents would also be applied to the Wisconsin resident, and those charges for tuition and fees which apply to Wisconsin residents would be applied to the Minnesota resident under the agreement.

5. *Magnitude of the Plan.* The intent of the plan would be to provide for an approximately equal total number of students crossing the border in each direction. Under this agreement the total number of Minnesota students attending Wisconsin institutions who are granted in-state residency status would equal the total number of Wisconsin students attending Minnesota institutions. The maximum number of students to be granted residency status would be determined by the two state coordinating agencies on or before January 2nd of each year. Summer school enrollment allocations under this agreement wil be determined separately from the academic year enrollments. In the event that the number of students wishing to attend institutions in the neighboring state should exceed the maximum provided under the agreement, the sending state would determine which students should be included under the arrangement. The allotment of students to each institution will be determined by the coordinating agency of the receiving state.

APPENDIX I

PROPOSED MINNESOTA-NORTH DAKOTA HIGHER EDUCATION RECIPROCITY AGREEMENT

1. The State Board of Higher Education on behalf of the State of North Dakota and the Minnesota Higher Education Coordinating Commission on behalf of the State of Minnesota are parties to this agreement.

2. *Purpose and Nature of the Plan.* The purpose of this agreement is to improve the availability and accessibility of higher education opportunities for Minnesota and North Dakota residents. It is also the purpose of this agreement to make maximum use of available programs within the two states and to prevent unwise duplication of programs. This will be accomplished by permitting residents of both states to attend institutions in the neighboring state at resident tuition rates. The Minnesota resident will be required to meet those admission and performance requirements which are applicable to North Dakota residents, and the North Dakota resident will be required to meet those admission and performance requirements which are applicable to Minnesota residents. Those charges for tuition and fees which apply to North Dakota residents will be applied to the Minnesota resident. Those charges for tuition and fees which apply to Minnesota residents will be applied to the North Dakota resident.

3. *Duration of the Agreement.* The plan to be implemented under the agreement would be regarded as an experimental step that will provide experience to be taken into account in formulating a permanent agreement. This experimental agreement will become effective at the beginning of the 1971 autumn sessions of the institutions involved and will be reviewed at the end of the second year and every two years thereafter.

4. *Scope of the Plan—Students.* Minnesota and North Dakota residents who are eligible to attend a state institution of higher education in their respective state at in-state resident tuition rates are eligible under this agreement. Residency status will be determined by the state in which the student or prospective student claims residency.

5. *Scope of the Plan—Institution.* This agreement shall include all higher education institutions which are governed and operated by the State Board of Higher Education in North Dakota and the Board of Regents, the State College Board and the State Junior College Board in Minnesota.

6. *Magnitude of the Plan.* The intent of the plan is to provide for an approximately equal exchange of students between the states. The total number of students from Minnesota accommodated in North Dakota institutions shall equal the total number of students from North Dakota accommodated in Minnesota. For the purposes of this agreement, one graduate student shall equal three undergraduate students. The number of students to be accommodated each academic year will be determined by the parties to the agreement. In the event that the number of students wishing to attend institutions in the neighboring state should exceed the maximum determined, the sending state would then determine which students should be included under the arrangement. The parties to the agreement may place a limit on the maximum number of students to be accommodated in individual programs and at individual institutions.

7. *Application and Other Procedures.* Administration arrangements for application and selection of students shall be determined by the two state coordinating agencies on or before January 31 of each year.

APPENDIX J

STATE SUPPORT FOR ADULT AND CONTINUING POST-SECONDARY EDUCATION IN MINNESOTA

Historically, support for post-secondary education in Minnesota, as in most states, has been focused on regular academic programs at under-graduate and graduate levels, and on research. Except for funds provided to the Agricultural Extension Service at the University of Minnesota, and to the Vocational-Technical Division of the State Department of Education, relatively few support dollars have been made available to adult or continuing education at post-secondary levels. This in a time in which adult and continuing education are being called on to play increasingly vital roles in a rapidly changing and complex society, presents an all but intolerable situation.

In its 1969 report, *Proposal for Progress,* the Minnesota Higher Education Coordinating Commission made clear that "Every public institution should be expected to maintain a significant program of public service which is (1) designed to utilize effectively the particular strengths of that institution, (2) aimed at meeting specific and identifiable needs of the people of the local community and state, and (3) has, as its core, a suitable program of continuing education."

Implicit in such challenge is the sinew necessary to it: faculty resources, administrative staffs, and dollars for program development. Yet in most instances, in our institutions of higher education, one or more of these is lacking. Faculty resources are sorely taxed as they seek to respond to expanding enrollments in regular undergraduate and graduate programs. Administrative staffs are, in most instances, minimal. Dollars for program development are all but non-existent. In short, in a time in which adult and continuing education in our institutions of higher education face challenges of unmatched proportions, resources necessary to them are in woefully short supply.

As noted, there are exceptions. One of these is the Agricultural Extension Service of the University of Minnesota. Established under the Smith-Lever Act of 1914, the Service is funded through county, state and federal appropriations. Designed originally to serve primarily the rural community, the Service has provided a model for extending the resources of a university to the community. In the process it has extended some programs to non-rural Minnesotans. But it alone cannot meet the total needs; its funds are limited and its activities are subject to some statutory limitations.

The Vocational-Technical Division of the State Department of Education also enjoys support from state and federal funds, which make possible courses for from 60,000 to 70,000 adult students in Minnesota through the Area Vocational-Technical Schools. But again, support is limited, and restricted to vocational courses.

Lacking parallel sources of funding for the broader range of adult and continuing education efforts, the colleges of the state, and the University, have of necessity applied the principle of self support. Programs have been designed for those with an ability to pay, and fees have been set at levels that, as nearly as possible, return full costs.

That the system of self-support works is evidenced by the many thousands of persons who each year are served by adult and continuing education at post-secondary levels. At the University alone, more than 50,000 persons will enroll in formal educational programs through the General Extension Division this year. State and private colleges will enroll many others. And yet, this way is filled with inequity. Those who lack the ability to pay, and this includes many who are the most needful of educational opportunities, find the doors closed to them. Programs for which there is vital need, but for which fees either cannot be charged, or cannot equal the costs incurred, are not offered. And many areas of the state, because of the costs involved in extending programs at distances from campuses, go unserved.

Roles of Adult and Continuing Education

Adult and Continuing Education provide the means through which the accumulated knowledge in our institutions of higher education is made available to adult citizens, aiding them in the solution of their problems, helping them to achieve educational and occupational goals, enriching their lives. Through adult and continuing education colleges and universities achieve a vital link with the community and intimate involvement in its concerns.

There are three major areas of adult and continuing education in institutions for post-secondary education: (1) credit courses; (2) non-credit programs and/or courses; and (3) community service programs. The majority of institutions for post-secondary education in Minnesota are engaged in one or more of these.

Credit courses are those that carry residential credit, even though offered through extension, and that may be applied toward the requirements of an academic degree. Also included are certificate credit courses, which may be applied toward completion of requirements for certificate programs.

The area of non-credit courses is one of the most rapidly expanding of all areas in post-secondary education. Included are conferences, seminars, workshops and institutes which provide continuing education for occupational competence, for personal development, for civic awareness and leadership. Among those of major importance are the programs of continuing education in the professions.

Through community service programs, the college or university makes its major thrust into the community, aiding in the solution of problems, and in turn gaining new insights that point the way to new solutions.

As was noted, the majority of institutions for post-secondary education in Minnesota are engaged in one or more of the three areas of adult and continuing education. The University of Minnesota is engaged in all three through the Agricultural Extension Service and the General Extension Division. The Agricultural Extension Service provides a state-wide network of county agents and home advisors and a wide range of non-credit and community service programs. It has a corps of specialists in various University departments who give leadership to the development and implementation of instructional programs throughout the state.

The General Extension Division of the University offers a full range of credit, non-credit, and community service programs, the largest of which is the evening class credit program that in 1970-71 will enroll more than 35,000 students. As with most of such extension programs in major universities, the programs of the General Extension Division are largely self-supporting. In 1970-71 the Division will be required to generate through income almost 87 percent of its budget of more than $5 million. As a consequence it will not be able to serve important segments of the community that can't afford to pay their own way, and in the case of the evening class student, it will have to charge higher fees than those charged to students regularly enrolled in day programs.

The state colleges of Minnesota have also been engaged in all three areas of adult and continuing education, if to a somewhat lesser degree. A major share of their efforts has been in credit courses offered off campus, largely in the field of education. Unlike the University where all evening classes are considered to be extension offerings and so are not funded as a part of the instructional base of the institution, evening classes offered on campus at the state colleges are a part of the regular instructional programs. It is the off-campus evening classes that are considered to be extension programs, are not funded, and for which students pay a higher tuition.

Again, as with the University, continuing education programs of the state colleges are largely, or wholly, self-supporting, and so are, in major portion, limited to those with an ability to pay full costs. A further problem from the standpoint of the state colleges is a lack of sufficient staff with primary assignment in adult and continuing education.

The junior colleges of Minnesota, the majority of which are relatively new to the scene, have not achieved the same levels of involvement in adult and continuing education. And yet, as "grass roots" institutions, they hold great potentials for involvement, particularly in community service programs. In the last session of the legislature funds were appropriated to the junior colleges, making possible the appointment of community service directors in a number of institutions. Remaining, however, is the need to augment staffs and provide program dollars.

The private colleges of the state have had an even more limited involvement with adult and continuing education, and yet they represent an important resource as the state moves to meet the enormously increased demands that the people of Minnesota are making and will continue to make of their institutions for post-secondary education. As would be expected, adult and continuing education programs of the private colleges are almost wholly self-supporting.

Study of Existing Programs

In efforts to determine the extent of existing programs of adult and continuing education in institutions for post-secondary education in the state, two studies have been undertaken by the Advisory Committee on Extension and Continuing Education Programs of the Minnesota Higher Education Coordinating Commission. The first of these studies, an analysis of extension and continuing education credit courses offered for post-secondary education institutions in 1968-69 has been completed, and the final report released.

Among the more significant findings are these:

1. The geographic distribution of credit course offerings was uneven. The number of courses offered ranged from none in 20 counties, to 1,300 in Hennepin County. As would be expected, those counties having a college or university located in them had substantially more offerings.
2. All systems of higher education were involved in the offering of credit courses. All of the state colleges, all of the University of Minnesota campuses, eleven of the state junior colleges and six private colleges were included among those offering courses.
3. In contrast to the traditional concept of extension courses being offered off campus, only 531 of the total of 3,053 courses were scheduled off campus. Of these 531, more than 50 percent were offered at locations within ten miles of the campus.

4. The full time equivalent of enrollments, based on 15 credit hours per FTE, for all institutions, was 16,643 with more than half of this number, 9,696 being offered in the seven county Twin City area.
5. There were 20 counties in which no credit courses in adult and continuing education were offered at the post-secondary level in 1968-69, and an additional 48 counties outside of the seven county metropolitan area in which less than 10 courses were offered.

The study failed to reveal any substantial duplication of effort between institutions. In part this is due to the fact that offerings were limited in large measure to the campuses of the respective institutions, or the immediate service areas.

In the Twin Cities, where the emergence of continuing education programs in the junior colleges will be increasingly felt, duplication of offerings at lower division levels between the University and the junior colleges could become a factor. However, with the growing demand for adult and continuing higher education, this need not pose serious problems. The important thing is that there be effective coordination of efforts.

The second study being undertaken by the Advisory Committee on Extension and Continuing Education Programs is that of non-credit offerings. While the data have been collected, the analysis of them has not been completed.

It is clear from the volume of data that this is an area of great activity. It is equally clear that it is one in which definition is difficult, identification of the total range of programs is not easily had, and the need for coordination is of major concern.

To an even greater extent than with credit class offerings, the non-credit programs are based on self support thus raising once more the problem of large segments of the population whose needs are unmet because of their inability to pay.

As with credit class offerings, the University of Minnesota is the principal source of non-credit offerings, with the programs of the Agricultural Extension Service providing a major thrust state-wide, augmented by those of the General Extension Division.

The range of populations served is as broad as society itself, being limited only by sources of funding and available faculty and staff. It extends from homemakers through teachers and school administrators, youth leaders, public officials, business and industry, to continuing education in the professions.

Increasingly the state colleges, the junior colleges and private institutions are playing important roles, their limitations again being those of resources, faculty, and staff.

One thing is clear; the range of needs unmet far outdistances those that are. If Minnesotans are to meet the challenge of change, and if learning is to be, as it must, a lifelong thing, then these efforts must be increased countless fold.

Community Service

Finally, there is the area of community service, newly emerging but of a first order of importance as society seeks to resolve its increasingly complex problems. No longer can the campus serve as an ivory tower, a haven of refuge for teaching and research. Today's colleges and universities find themselves central to the struggle to provide a better life for all, and to escape the gathering clouds of pollution, blight and oppression.

Traditionally land grant institutions such as the University of Minnesota, through the Agricultural Extension Service, have addressed themselves to problems of the rural community. But today's problems include insistent problems of the city. And while the Agricultural Extension Service has sought to adjust to some needs on the urban scene for which it has competence, its major commitment is still to the agricultural community, and resources have not permitted broad scale efforts in the urban setting.

Through its General Extension Division, the University has been able to make limited advances on the problems of the city. The Municipal Reference Bureau and the Center for Continuation Study have provided important resources, and means by which the brightest minds of a broad range of disciplines might address themselves to society's concerns. But as always the specter of self support intruded, and while making significant and lasting contributions, efforts, of necessity, fell substantially short of the mark.

State colleges, junior colleges, and private institutions, equally hard pressed for dollars and lacking staff whose sole concern was with community service achieved scattered and modest success, but found themselves barred from any involvement in depth.

In 1965, the Congress, recognizing the need for means through which the resources of higher education might be addressed to the growing problems of society, enacted Title I of the Higher Education Act of 1965. Designed to provide "grants and contracts . . . to strengthen continuing education and extension methods and teaching and public service resources of colleges and universities," the act authorized appropriations of $25,000,000 in the first year and $50,000,000 in each of two succeeding years.

Unfortunately actual appropriations fell far short of authorizations. In the first year only $10,000,000 was appropriated, and in subsequent years appropriations fell to $9,500,000. Still a beginning was made and institutions that previously had had little or no opportunity for meaningful involvement in community service, now found it possible.

The results in Minnesota have been impressive. Through careful planning and judicious use of matching funds, the approximately $175,000 in federal funds made available to the state in each of the five years has enabled 11 institutions, including junior colleges, state colleges, private institutions, and the university to mount 49 programs of major importance. The impact of these programs extends far beyond the immediate results achieved. Of greatest significance has been the effect on the institutions themselves, the competence that has been gained and the heightened awareness of the increasingly vital role of the campus in serving society's needs.

Of equal importance has been the acceptance of the need for a total approach to the problems that are faced. The role of the Minnesota Higher Education Coordinating Commission in administering Title I programs, in identifying needs and assigning priorities, points the way to the higher levels of coordination that are so essential if the effective use of limited resources is to achieve all that needs doing.

To ensure that the post-secondary educational institutions in Minnesota will achieve their fullest effectiveness in meeting the adult and continuing education and community service needs of the state, the following recommendations are made to develop new programs and adapt present structures.

Programs

1. Of first importance is the need to develop a comprehensive, coordinated state-wide plan for the development of adult and continuing education and community service. High priority should be given to efforts to improve coordination among several levels of educational institutions, and the many public and private agencies, and organizations involved in adult and continuing education.

2. When credit programs in adult and continuing education in the state colleges, junior colleges and university are coordinated with the comprehensive statewide plan, the legislature should be urged to fund them at levels commensurate with those programs for regular academic programs, thereby eliminating the cost differential of day and night school classes to the students.

3. When non-credit programs in adult and continuing education in the state colleges, junior colleges and university are coordinated with the comprehensive statewide plan, the legislature should be urged to fund more adequately staffs necessary to the administration of these programs, the needs in each instance to be determined by the respective institutions.

4. The legislature should be requested to appropriate to the Minnesota Higher Education Coordinating Commission, $500,000 ($200,000 as matching funds and $300,000 as grants to institutions) in the first year of the 1971-73 biennium and $700,000 ($200,000 as matching funds and $500,000 as grants to institutions) the second year of the 1971-73 biennium, these funds to be used as matching funds for Title I appropriations and in making grants to institutions of higher education in Minnesota for the support of Community Service programs. The funding ratio for grants to institutions should be one-ninth for institutional support, two-ninths state support, and six-ninths federal support.

A specific example of the latter is an interinstitutional cooperative project. Direct support is requested to run this pilot project that will serve the needs of public service employees in Minnesota. The present extension opportunities for local, state and federal government officials are limited by a real access to each system's programs. We believe the four public higher education systems can join to provide pilot extension programs that will be available to government employees statewide, generate curricula that will enhance the interaction between public employees at all levels of government, and develop experience that will enhance the chances of developing a comprehensive state-wide plan for coordinated interinstitutional extension programming.

5. Particular attention should be given to the development of instructional technology that will maximize the effective use of limited teaching resources. Of importance to adult and continuing education programs is the development of state-wide networks of library, computer, radio, and television facilities.

Structures

6. The Advisory Committee on Extension and Continuing Education Programs should be reconstituted as the Interinstitutional Advisory Council on Community Service and Continuing Education and that its membership be comprised of thirty representatives from institutions of higher education that are engaged in community services or continuing education activities.

7. A Public Advisory Committee on Post-secondary Continuing Education should be established whose twenty-man membership should be broadly representative of the community and its various interest groups. Included should be limited governmental representation. This Advisory Committee should maintain continuing review of the efforts of institutions of post-secondary education to meet the education needs of the state's adult population and make recommendations with respect to policy for consideration by the Advisory Council and the Commission.

APPENDIX K

INTER-INSTITUTIONAL EDUCATIONAL TELEVISION BUDGET

Priority	1971-72	1972-73
1. Regional Production Centers ...... Establish the remaining six centers @ $165,000	$495,000	$ 495,000
2. Inter-Institutional Development Program .... Funds to develop television instructional materials for joint use by colleges and universities	200,000	200,000
3. Television Coordinator .... To provide for acquainting the faculty with the capabilities of television and indicate what is already available in the field	22,000	22,000
4. Continuing Program of Research... To maintain on-going evaluation of television instruction and provide new information for its improvement	30,000	30,000
5. Pilot Model Interconnection....... To provide for the needed experience in the use of communications signals among several institutions	200,000	200,000
ANNUAL TOTAL	$947,000	$ 947,000
GRAND TOTAL		$1,894,000

APPENDIX L

REPORT OF THE MINNESOTA INTER-INSTITUTIONAL TELEVISION PROGRAM

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SUMMARY

The 1969 Legislature appropriated $540,000 for equipping the third regional educational television production center and for instructional programs in inter-institutional educational television. The appropriation was in response to the continued implementation of the recommendations presented in the Inter-Institutional Television Feasibility Study, for which the 1965 Legislature appropriated $150,000 in order to determine the potential usefulness of inter-institutional educational television in Minnesota higher education.

The cost of implementing the recommendations of the Feasibility Study was estimated to be $2,712,134. Subsequent legislation in 1967 authorized an appropriation of $350,000 to start equipping two regional production centers and several experimental classroom centers.

Two advisory committees were established to aid the Commission in fulfilling various aspects of its responsibility under the legislation. The Television Advisory Committee comprised of two representatives from each segment of higher education, was organized to provide the Commission with a broad view of the total needs and priorities of higher education with respect to inter-institutional television. A second group, the Television Coordinators Committee was comprised of persons from various institutions who work with or are associated with the operation of instructional television. The latter committee advised the Commission on technical considerations.

Presently three of the nine regional production centers recommended in the Feasibility Study have been established. They are located at Mankato, Moorhead, and Winona State Colleges. Experimental classroom centers have been established at Bemidji State College, St. Cloud State College, Southwest Minnesota State College, and the Duluth, Morris, and Minneapolis campuses of the University of Minnesota.

As the production centers at the institutions became operational, the demand for the use of facilities created a need for additional funds to develop instructional materials. The 1969 Legislature appropriated funds for the production of inter-institutional instructional television materials. During the first year of the biennium, 41 instructional materials support grants for educational television were made totaling $189,907.90 and involving 200 faculty members from 36 different institutions. Twenty-five of these institutions had enrollments under 3,000. As continued progress in funding the production of educational television materials is made the next step can be taken as recommended in the Feasibility Study which is to establish a pilot model interconnection between several institutions to gain the needed experience in the exchange of communications signals.

BACKGROUND

Commercial and education broadcast television have had profound impact upon the lives of most Americans. The average citizen no longer is exposed only to verbal or written reports of events which influence the course of history, for example. He now can *see*, through television, what has occurred and often what is occurring. Television has become such an important and commonplace part of everyday living that it is now difficult to imagine what our society would be like without it.

Anyone who doubts the great power of effectively-used television upon opinions, attitudes, and information acquisition of the citizens of this country need only be reminded of (1) the billions of dollars which advertisers find it profitable to expend for television commercials and (2) great concern about the effect upon presidential elections of both the quality of performance and amount of exposure of candidates on television. Largely because of television, Americans know more than ever before about current events, candidates and holders of high public offices, and products which are available for purchase.

Lacking the resources of the business community use of television for instructional purposes in colleges and universities has lagged far behind the rapid and impressive development of Commercial Television. How strange it sometimes seems that television has been used so extensively and so effectively to inform and shape opinions about cigarettes and detergents, but so little to achieve the purposes of instruction in colleges and universities.

Recognizing the large gap between the potential benefits and the present stage of development of instructional television, the 1965 Legislature requested that the University of Minnesota conduct an intensive study to determine the feasibility of inter-institutional utilization of instructional television to improve effectiveness in achieving the purposes of higher education in Minnesota. In order to provide for the implementation of the request, the 1965 Legislature appropriated $150,000 to finance the study.

With the assistance of an advisory committee which included representation from several components of Minnesota higher education as well as representation from private and public service groups which have particular interest in television, the University of Minnesota conducted a thorough study of both programmatic and technical aspects of instructional television.

The study director—Dr. Paul Cashman, Vice-President for Student Affairs at the University, and Mr. Edward McMahon, Coordinator of Institutional Resources at Mankato State College—acquired the assistance and advice of nationally-recognized experts in reviewing experience in other states and assessing present potential benefits of instructional television in Minnesota higher education.

The comprehensive Inter-Institutional Television Feasibility Study provided several conclusions upon which recommendations for developing inter-institutional instructional television in Minnesota higher education were based. An appropriation of $2,712,134 was proposed for implementing the study recommendations. The 1967 Legislature accepted the recommendation in principle and appropriated $350,000 for partial implementation. The 1969 Legislature continued to implement the recommendations with an appropriation of $540,000.

Legislative action in 1965, 1967, and 1969 represented important initial steps in providing the foundation for developing inter-institutional instructional television in Minnesota higher education. However, any significant impact in terms of achieving potential benefits is dependent upon continued progress in funding for implementing of the Feasibility Recommendations.

THE 1965 TELEVISION FEASIBILITY STUDY

The *Report of the Minnesota Inter-Institutional Television Feasibility Study* authorized by the 1965 Legislature served to (1) examine the educational factors so as to assess the potential educational usefulness of a state inter-institutional development; (2) examine the engineering questions so as to determine the kind of engineering plan which would be necessary to serve the educational specifications; and (3) develop recommendations which may guide the Legislature, higher education, and the State of Minnesota in the years ahead.

The recommendations contained in the Feasibility Study calling for appropriations are summarized below. The complete list of recommendations is contained in the 1965 Television Feasibility Study.

1. The Liaison and Facilities Commission (now called the Higher Education Coordinating Commission) should be requested to assume responsibility for management of inter-institutional television in Minnesota. This responsibility should include funding for facilities, programming, and coordination including the management of federal funds available for this purpose.
2. A Wide Area Telephone Service line to serve as an interconnection between institutions to transmit voice, computer data, and expedite the sharing of library resources should be provided.
3. Nine regional production centers should be established at the state colleges and outstate campuses of the University of Minnesota.
4. A microwave model inter-connection should be established between University of Minnesota-Minneapolis, University of Minnesota-Morris, and Southwest Minnesota State College, as well as a similar connection between the state colleges at Mankato and Marshall with consideration given to including a junior college and KWCM-TV, Appleton.
5. Funds administered by the Liaison and Facilities Commission should be provided for the development and production of television materials on an inter-institutional basis.
6. A continuing program of research should be conducted to maintain an on-going evaluation of inter-institutional television and to provide new information relative to improving instructional effectiveness.

The appropriation by the 1967 Legislature provided for experimentation and pilot programs in inter-institutional educational television. Funds were provided for equipping two experimental regional television production centers and seven experimental classroom television production units. The 1969 Legislature provided funds for program development and production, and a third regional production center. Funds for the general costs of operating the two regional production centers have been provided by the institutions where the centers are located, namely, Moorhead, Mankato, and Winona State Colleges.

ADVISORY COMMITTEES

Two advisory committees were established to aid the Commission in fulfilling its responsibilities under the legislation. Committee members represented each segment of higher education including persons associated with the operation of instructional television.

The Television Advisory Committee comprised of two representatives from each segment of higher education, was organized to provide the Commission with a broad view of the total needs and priorities of higher education with respect to inter-institutional television. This committee established guidelines for the selection of sites for the regional production centers. The committee reviewed information on the television capacity and potential of each eligible institution which expressed an interest in being designated as a regional production center.

The criteria used for determining the locations for the two experimental regional production centers authorized by the 1967 Legislature include, (1) the scope of current television programming and equipment inventory, (2) adequacy of short-range television planning, (3) adequacy and nature of long-range planning, (4) interinstitutional assurance of space, staff and programming support for the latter. After consideration of all of the alternatives, the committee, and subsequently the Commission, decided that the three regional instructional television production centers should be located at Mankato State College, Moorhead State College, and Winona State College.

The Television Coordinators Committee is comprised of persons from various institutions who work with or are associated with the operation of instructional television. This committee advised the Commission on technical considerations such as the development of experimental classroom production units and the purchase of compatible and efficient equipment. Together with consulting engineers and the state purchasing office, the committee helped to evaluate the bids received for the supplying and installing of the desired equipment; they also continuously evaluate the supplied equipment in terms of its performance and usefulness. Members of this committee review and advise the Commission on proposals for inter-institutional educational television instructional materials development support grants.

Both Advisory Committees aid the Commission in establishing goals and priorities for the orderly progress toward making inter-institutional television a useful and efficient tool in higher education institutions.

TELEVISION CENTERS

Two kinds of television centers were established: regional production centers, and experimental classroom centers.

The state colleges at Mankato, Moorhead, and Winona were designated as regional television centers. The Bemidji, St. Cloud, and Southwest State Colleges and the Duluth, Morris, and Mineapolis campuses of the University of Minnesota received experimental classroom units.

The regional production centers are located in permanent facilities on resident campuses and serve several functions. These include, one, to serve the immediate needs of the resident institution, as well as those of nearby junior colleges and private institutions; two, to develop the use of television on an interinstitutional basis; three, to the extent that facilities permit, to be available as a production center for other educational purposes, e.g., by elementary and secondary schools; and four, to provide an opportunity for the resident faculty to become proficient in the use of instructional television and, through conferences and demonstrations, to acquaint faculty members from other institutions with the techniques of television production. A fifth function is to serve as an experimental and pilot institution. Making the results of this innovation and experimental work available to other institutions reduces the likelihood that programs with undesirable outcomes will be needlessly repeated.

To carry out these functions requires specialized facilities and equipment. Each regional center has two studios, interconnected for production, taping, viewing, and evaluating, or for conducting several functions simultaneously. Each studio is equipped with background sets and controlled lighting; the cameras are mounted on pedestals with fluid heads and have either zoom or fixed lenses. Housed in the master control room are electronic support systems, audio control console, multiplexer, and switches. Video tape machines are available for record and playback.

Should other institutions wish to use the facilities, the staff of the regional center provides assistance with all elements of production, from the initial planning stages through the final taping. Preparation of visuals used in television production may be scheduled in association with the resident institution's audio-visual graphic arts department. Institutions are requested to reimburse the resident institution for production supplies such as tape, film, and art materials, and for the costs of student help.

The experimental classroom centers at the Bemidji, St. Cloud, and Southwest State Colleges and on the Duluth, Morris, and Minneapolis campuses of the University have as a major function to determine the ways in which television can best be used on an intra-institutional basis. These centers also serve as a laboratory in which students may become familiar with the use and care of equipment and the production of television lessons. Further, they provide nearby institutions the opportunity to observe ways in which television can be used for instructional purposes.

Several examples may be cited to illustrate current use of intra-institutional television. One is micro-teaching, in which a student teacher conducts a lesson and then has the opportunity to observe the results via video tape and at the same time receive an oral evaluation by his peers and by the supervising teacher. Many experiments or demonstrations produce results which can be seen only through a microscope. Using image magnification, the teacher can show the results to the entire class simultaneously. Classes in speech and drama may use the equipment to record and play back a particular assignment. A teaching demonstration may be televised to a class of student teachers and/or may be video taped for later use.

Since the equipment is intended for use in all departments of an institution, ease of movement is of prime importance. Thus, the cameras are portable; and the provision of dolly-trucks facilitates the moving of video tape record-playback units, receiving monitors, and tripods.

INSTRUCTIONAL MATERIALS DEVELOPMENT PROGRAM

Instructional materials development is designed to encourage the sharing of existing resources by the use of inter-institutional television. Specifically this is accomplished by increasing the use of existing quality T.V. materials, by increasing faculty knowledge about T.V. capability, by increasing faculty skill in the use of T.V. for instruction, and by increasing cooperation among institutions. The foregoing efforts are the inputs toward accomplishing the major goal of the inter-institutional state-wide television program of improved instructional effectiveness and efficiency.

To accomplish the goals of television program development, six objectives were established by the State-Wide Inter-Institutional Television Advisory Committee. These were: (1) to increase the number of cooperating faculty members from different institutions, (2) increase the resources available to students, (3) increase the use of high quality instructional resources, (4) increase the use of television for instruction in areas it can best be used: i.e., image magnification, (5) increase the number of faculty using television for the first time and (6) increase the number of prepared programs getting multiple use.

Guidelines reflecting the goals and objectives of the program were developed for use by institutions interested in applying to the Higher Education Coordinating Commission for television program materials support grants. Grants were made to cover the cost of faculty travel, expendable items used during production such as tapes, paper, and ink. Also included was a reasonable cost for cameramen, arts and graphic men, sets, and special announcers.

Before projects were accepted as eligible for grants they needed to meet the following four criteria: (1) be designed to enrich or improve education, (2) be developed and usable by more than one institution, (3) have an evaluation mechanism as a part of it, and (4) be considered of sufficient merit to justify its expenditure. Whether proposals meet these criteria are in many cases subjective determinations. To aid in making these determinations an advisory committee of persons working in the television materials production area is selected to review the projects. Each rejected project is commented upon by the committee in terms of suggesting ways in which the project can be developed to meet the criteria and get the maximum potential from the television media. Even projects which meet the criteria are reviewed in terms of how they may be improved.

Priorities established by a point system are assigned to the projects accepted as eligible for funding. Points are assigned based upon the number of institutions involved in the project, whether the institution has received a grant before, how often the materials will be used, and whether the projects are designed to handle special instructional problems. The projects with the higher numerical points will be funded down through the list until the total monies allocated for approval at that time are obligated.

How has the program progressed? During this fiscal year 41 Materials Development Grants have been made totaling $189,907.90 and ranging in cost from $167 to $17,004. Participating in the development of these materials are 207 instructors from 37 different institutions including colleges, universities, and vocational schools. Of the 37 institutions 25 of them have enrollments of less than 3,000 students. The projects range from micro teaching sequences to image magnification. A list of the projects funded during the first year of the biennium follows:

LIST OF TELEVISION INSTRUCTIONAL MATERIALS DEVELOPMENT GRANTS

Project	Grant	Applying Institution	Cooperating Institutions
Teacher Training of Handicapped	$ 1,898.75	Moorhead State College	Bemidji State College Univ. of Minn., Morris
Mississippi River Ecology	3,471.25	Winona State College	St. Cloud State College
Health and Family Life	2,498.03	Moorhead State College	Bemidji State College Concordia, Moorhead North Dakota State Univ.
Student Placement Orientation	1,702.90	Winona State College	St. Cloud State College
Television Production Consultant	1,500.00	Moorhead State College	Serves the Regional Area
Teacher Training in Elementary Science	1,823.60	Winona State College	College of St. Teresa
Literature Course on American Frontier	2,640.00	St. Cloud State College	College of St. Benedict St. John's University
Television Production Meeting	893.86	Winona State College	Serves the Regional Area
Criminology	9,121.92	Univ. of Minn., Duluth	Mesabi State Junior College

List of Television Instructional Materials Development Grants — Contd.

Project	Grant	Applying Institution	Cooperating Institutions
Teaching Therapeutic Relationships	3,515.00	Mankato State College	Minn. Valley Social Adoption Center, Cambridge State Hosp., St. Peter State Hosp., Faribault State Hosp.
Drug Education Health	5,234.00	Winona State College	St. Mary's College, College of St. Teresa
Instruction: Mentally Retarded	1,6[illegible]5.00	Mankato State College	Minn. Valley Social Adoption Center, Cambridge State Hosp., St. Peter State Hosp., Faribault State Hosp.
Human Growth and Development	4,563.00	Winona State College	Red Wing State Training School, Rochester State Hospital
Television Production Consultant	15,000.00	Mankato State College	Serves the Regional Area
Nursing Course Planning	630.00	Mankato State College	Gustavus Adolphus College, Winona State College, College of St. Teresa, Rochester State Junior College, Austin State Junior College
America Studies "The 60's"	812.00	St. Cloud State College	Bemidji State College
Instruction: Modern Dance	2,336.00	Mankato State College	Moorhead State College
Plant Biology Techniques	830.00	Mankato State College	Bethany Lutheran College, Inc.
Group Dynamics: Nursing	1,080.00	Mankato State College	Mankato Area Vocational-Technical School
Minnesota History	8,260.00	Winona State College	Rochester State Junior College
Beginning Speech	3,104.00	Winona State College	Rochester State Junior College
Instruction: TV Maintenance	1,250.00	Mankato State College	Serves the Regional Area
Business Education Planning	167.00	Winona State College	Rochester Area Vocational-Technical School
Industrial Education Planning	167.00	Winona State College	Rochester Area Vocational-Technical School
State College Common Market	925.00	Winona State College	All Colleges in the State College System
Self-Instructional Microteaching	15,941.64	Univ. of Minn., Morris	Southwest Minnesota State College
Issues in the Environment	17,004.00	Univ. of Minn., St. Paul	Univ. of Minn., Crookston, Austin State Junior College, Worthington State Junior College, Itasca State Junior College
Lakes, Glaciers, and Population	6,725.00	St. Cloud State College	Mankato State College, St. John's University, College of St. Benedict
Technical Theatre Materials	9,181.00	Univ. of Minn., Morris	Southwest Minnesota State College
Minnesota Geography	5,398.90	Mankato State College	St. John's University, College of St. Benedict, St. Cloud State College
Social Science Disciplines	8,351.00	Mankato State College	Mesabi State Junior College, Lakewood State Junior College, Bethany Lutheran College, Inc., Dr. Martin Luther College, Gustavus Adolphus College
Disadvantaged Learner	6,349.74	Univ. of Minn., Duluth	College of St. Scholastica
Art Series	4,218.00	Bemidji State College	St. Cloud State College
Elementary Physical Education	3,678.00	Bemidji State College	Moorhead State College
Drug Education	6,975.34	Univ. of Minn., Duluth	Duluth Area Institute of Technology, Duluth Board of Education
Student Teaching Abroad Program	3,947.60	Moorhead State College	Winona State College, Univ. of Minn., Morris, St. Cloud State College, North Dakota State Univ., Concordia, Moorhead
Contemporary Technology	3,635.08	St. Cloud State College	Mankato State College, St. John's University, Bemidji State College
Art Education	3,682.00	Winona State College	Southwest Minnesota State College, Mankato State College, College of St. Catherine
Social Science Concepts	4,723.50	Mankato State College	Univ. of Minn., Mpls., Gustavus Adolphus College, Lakewood State Junior College
Television Production Consultant	15,000.00	Winona State College	Serves the Regional Area
Teaching Economics	3,352.75	Mankato State College	Univ. of Minn., Minneapolis, Univ. of Minn., Duluth, St. Cloud State College
TOTAL TO JULY 1, 1970	$189,907.90		

APPENDIX M

SUMMARY OF COMPUTER AND INFORMATION SYSTEMS BUDGET PROPOSALS FOR HIGHER EDUCATION

System	1971-72 Total Budget	1972-73 Total Budget
University*	$ 1,478,780	$1,637,060
State Colleges	1,410,242	1,524,719
State Junior Colleges	271,351	305,471
Higher Education Coordinating Commission (HECC)	324,250	359,250
Sub-Total for Computing in Higher Education	3,484,623	3,826,500
HECC (State-Wide Automated Library System)	1,011,400	2,284,500
TOTAL	4,496,023	6,111,000
GRAND TOTAL FOR BIENNIUM	$10,607,023	

*Computing for administrative purposes is currently under study. Costs for administrative computing are not included in these figures. Figures for the state colleges and other state junior colleges do include costs for administrative uses for computing.

UNIVERSITY OF MINNESOTA

1971-73 Computer Budgets

Budget Requests Submitted by the University of Minnesota

TABLE I FACILITIES REQUESTS

System	Recommended by State Study	1971-'72 Request	Acquisition Plan	Description	1972-'73 Request	Obligation 1973 and Beyond
I. State-Wide						
A. 6600 System peripheral equipment for remote terminals	$230,000	$230,000	purchase	Communications Controller Disk Expansion Print-Out Expansion	none	none
B. Time Sharing	43,000	43,000	lease	System capable of handling not less than 96 low-speed terminals by the second year of the biennium	$ 86,000	Annual Leasing costs for subsequent years $86,000
Totals	$273,000	$273,000			$ 86,000	
II. University						
A. Additional medium-speed terminals to 6600	$175,000	$120,000	purchase	Six terminals for each year of the biennium at an estimated cost of $20,000 per terminal	$120,000 (175,000)	none
B. Terminals to Time-Sharing System	36,000	36,000	lease	40 teletype terminals for 1971-'72; 20 additional terminals for 1972-'73 at estimated lease cost of $75 terminal per month	54,000	Annual Leasing costs for subsequent years $54,000
C. Video terminals (with keyboard) for Computer Assisted Instruction	—	19,200	lease	8 CAI terminals at $200/month for '71-'72; 16 CAI terminals for '72-'73	38,400	Annual Leasing costs for subsequent years $38,400
D. Expansion of UMD System	55,000	55,000	purchase	Expansion of central core memory: 16K each year of biennium	55,000	none
E. Instructional Laboratory Computing	$300,000	$200,000	3 year time purchase plan	Two systems; one for Computer Science Department and one for Electrical Engineering Department. See Appendix for description.	$200,000 (300,000)	$200,000
F. Administration Computer System	—	—	purchase	Expansion of Disk capacity	70,000	none
Total		$430,200		Total	$537,400	$200,000 plus $178,400 Annual Leasing Cost
Recommended by State Study	($566,000)			Recommended by State Study	($654,000)	

TABLE II OPERATING BUDGETS

University

Budget requests are for operating costs associated with instructional usage only. For example, for the 6600, the usage for 1971-'72 is anticipated to be 38% instructional, 62% research; for 1972-'73, 45% and 55% respectively. The funding level for 1970-'71 is $517,200 for all instructional computing.

The budget below includes the University's proposed budget for development and instruction in Computer-Assisted-Instruction.

	1970-'71 Funding Level	Incremental Request 1971-'72	Total Budget 1971-'72	Incremental Request 1972-'73	Total Budget 1972-'73	
Staff	$404,800	$179,300	$584,100	$126,800	$ 710,900	
(Number) F. T. E.	(34)	(16)	(50)	(11)	(64)	
Supplies and Expenses..	112,400	101,080*	213,480*	133,280*	346,760*	
Total	$517,200	$280,380	$797,580	$260,080	$1,057,660	(Includes $21,600 for CAI)
Totals recommended in State-wide report		$333,580	$870,780	$181,580	$1,052,360	

(This does not include costs of CAI development and instruction)

*Includes ⅔ of the operating costs of the state-wide time-sharing system.

Comparison of Proposed Total Budgets and the Recommendations of the State Wide Study

TABLE III TOTAL BUDGETS

Total budgets — Facilities and Operating Costs Combined

1971-'72		1972-'73	
Recommended	Proposed Budget	Recommended	Proposed Budget
$1,699,780	$1,478,780	$1,792,360	$1,637,060

BUDGET DETAIL

Staff Costs

The request will provide funding for staff needs associated with the expansion of the University's system for state-wide use, for the time-sharing system and for Computer-Assisted-Instruction.

Specific positions to be funded include: data processing technicians, computer programmers, consulting staff (especially for undergraduate student use) and two administrative positions (Director, West Bank Computer Center and Associate Director, University Computer Center).

A. Supplies and Expenses

Approximately one-half of the operating expenses (other than staff costs) for a computer center is associated with maintenance of the equipment. For example, for the 6600, the maintenance contract for 1970-71 is $121,000 in a total *Supplies and Expenses* budget of about $225,000. The remaining costs cover a wide variety of supplies and expenses. 38% of this amount or $85,500 is an *instructional* cost for the 6600.

For 1971-72 the *Supplies and Expenses* budget associated with *instructional* computing at *all* centers (the 6600, West Bank, Duluth, etc.) is estimated to be $172,700. In addition, there will be communications costs for the remote terminals ($23,380) and other costs associated with time-sharing and Computer-Assisted-Instruction ($17,400) for a total of *$213,480*. For 1972-'73, this will increase to *$346,760*.

Additional details for communication costs appear below.

Communications

The state-wide plan identifies communications costs associated with an inter-connected computer complex. Each system is identifying its component of these costs in its budgetary proposal. For the University these are associated with (a) high speed remote batch-processing terminals for the 6600, (b) medium speed remote batch-processing terminals for the 6600 and (c) teletype terminals for the time-sharing system. The cost estimates are as follows:

(a) High speed terminals. Three of these now exist, for which the instructional usage is taken as 38% and 45% for 1971-'72 and 1972-'73 respectively. A fourth terminal is proposed for 1972-'73. The communication cost is $360 per month per terminal.

(b) Remote medium speed terminals. Six are proposed for 1971-'73 and six more for 1972-'73. The communications cost (modem leasing plus line costs) per terminal is $190 per month.

(c) Low-speed terminals. Forty (40) are proposed for 1971-'72; sixty (60) for 1972-'73. The communication costs will average about $10 per month per terminal.

The annual instruction-related costs are as follows:

	1971-'72		1972-'73	
(a)	.38 × 360 × 12 × 3 = (Rounded off: $4,920)	$ 4,920	145 × 360 × 12 × 4 = (Rounded off: $7700)	$ 7,676
(b)	6 × 190 × 12 =	$13,680	12 × 190 × 12 =	$27,360
(c)	40 × 10 × 12 =	$ 4,800	60 × 10 × 12 =	$ 7,200
	Totals	$23,380		$42,260
	(Incremental budget) =	$23,380	(Incremental budget) =	$18,880

Computer-Assisted-Instruction (CAI)

The state-wide plan recommends the acquisition of a CAI computer available to all systems of higher education for research and development activities, and for offering computer-based instruction on a pilot-plan basis. The University, in its Center for Human Learning, has been engaged in a development program for a number of years. One full course (first year German) has been programmed for the computer; the development of a second course (in Art History) is in progress. In addition, many short programs have been developed in a variety of disciplines, especially in the health sciences.

The University proposes to use the state-wide CAI facility for both developmental and for instructional purposes. It requests $20,000 for developmental activities for each of the two years of the biennium and $20,000 and $40,000 for '71-'72 and '72-'73 respectively for pilot-plan instruction. The total requests are therefore $40,000 and $60,000 for 1971-'72 and 1972-'73 respectively. The costs are divided about as follows:

	1971-'72	1972-'73
Leasing of terminals	$19,200	$38,400
Other Operating costs	$20,800	$21,600
Total	$40,000	$60,000

1971-72

COMPUTER, INFORMATION, AND CONTROL SCIENCES COMPUTING RESEARCH LABORATORY

The CICS Department has a unique need for its own computing equipment in order to effectively carry out its instructional and research functions. While some of the departmental instruction and research needs can best be met by a central facility serving the whole University, to attempt to meet them all would degrade the central facility service to an unacceptable degree.

A CICS computing research laboratory is therefore needed with both instructional and research roles. The former center around basic systems courses designed to provide insight into the actual operation of computing hardware and software. The research function would include basic operating system design, systems language, man-machine interfaces and interactive graphics.

The proposed laboratory would consist of an intermediate-scale machine with a small satellite computer and associated storage and I-O equipment. Possible choices are either DEC PDP-10 with PDP-15 satellite or XDS Sigma 7 with Sigma 3 satellite.

—Approximate cost $750,000 ($300,000 University, $450,000 NSF)

1972-73

ELECTRICAL ENGINEERING INSTRUCTIONAL LABORATORY

A small time-shared computer system will be dedicated to undergraduate electrical engineering education. Emphasis will be placed on the use of a computer as a simulator of complex phenomena rather than on its application to general purpose computation. Typical hardware might be two DEC PDP-8/I computers which are standard hardware; the entire system when developed could be replicated for use by other disciplines in which simulation of complex phenomena is an essential instructional device. The system would serve an undergraduate student body of 800 electrical engineers with ultimate extension to 4000 IT undergraduates.

—Approximate cost $300,000.

MINNESOTA STATE COLLEGE BOARD

1971-73 Computer Budgets

MINNESOTA STATE COLLEGES

COMPUTER BUDGET REQUESTS 1971-73 BIENNIUM

FACILITIES:

FACILITY	State-Study 1970-71	Actual 1970-71	State-Study 1971-72	Request 1971-72	State-Study 1972-73	Request 1972-73	Obligations 1973 & Beyond
SYSTEMS AVAILABLE FOR STATE-WIDE USES:							
MANKATO REGIONAL CENTER							
System Hardware...		$167,992		$ 240,708		$ 240,708	$1,083,188 On lease purchase plan
Unit Record.......		21,891		22,383		22,383	Leasing costs for for subsequent years
Terminals (CRT)...				3,000		3,000	
	$ 200,000	$189,883	$ 360,000	$ 266,091	$ 360,000	$ 266,091	
ST. CLOUD REGIONAL CENTER							
System Hardware..					$ 96,000	$ 96,000	Leasing costs for subsequent years
STATE COLLEGE COMPUTERS							
BEMIDJI STATE COLLEGE							
System Hardware..		$ 32,004		$ 54,000		$ 54,000	
Unit Record.......		6,396		6,396		6,396	
Terminals (RJE & CRT)....				12,600		12,600	Leasing costs for subsequent years
		$ 38,400		$ $72,996		$ 72,996	
MOORHEAD STATE COLLEGE							
System Hardware...		$ 39,900		$ 54,000		$ 54,000	
Time-Sharing Capability.........		9,000[a]		7,362		7,362	
Unit Record.......		10,800		10,800		10,800	
Terminals (RJE & CRT)......				12,600		12,600	
		$ 59,700		$ 84,762		$ 84,762	Leasing costs for subsequent years
ST. CLOUD STATE COLLEGE							
System Hardware...		$ 50,914		$ 52,914			
Unit Record.......		11,366		18,380		$ 18,380	
Terminals.........				12,600		3,000	
		$ 62,280		$ 83,894		$ 21,380	Leasing costs for subsequent years
SOUTHWEST STATE COLLEGE							
System Hardware...		$ 44,874		$ 54,000		$ 54,000	
Time-Sharing Capability.........				8,716		41,719*	
Unit Record.......		18,543		18,543		18,543	
Terminals (RJE & CRT)......		4,800[a]		12,600		12,600	
		$ 68,217		$ 93,859		$ 126,862	Leasing costs for subsequent years
WINONA STATE COLLEGE							
System Hardware..		$ 35,280[b]		$ 54,000		$ 54,000	
Time-Sharing Capability.........				13,982		17,983	
Unit Record.......		11,345		11,345		11,345	
Terminals (RJE & CRT)......		4,800[a]		12,600		12,600	
		$ 51,425		$ 91,928		$ 95,928	Leasing costs for subsequent years
Total State College Computer Facilities...	$ 260,850[c]	$280,022	$ 301,350[c]	$ 427,439	$ 309,450[c]	$ 401,628	
Total-Facilities.......	$ 460,850[c]	$469,905	$ 661,35[illegible]	$ 693,530	$ 765,450[c]	$ 763,719	

*—Includes CMI Development

[a]—Funded by HECC Grant.

[b]—Partially funded by HECC Grant ($23,000).

[c]—Includes maintenance costs, they are not included under operating support costs.

MINNESOTA STATE—COLLEGES—Cont'd

COMPUTER BUDGET REQUESTS 1971-73 BIENNIUM

OPERATING SUPPORT:

OPERATING SUPPORT ITEM	State-Study 1970-71	Actual 1970-71	State-Study 1971-72	Request 1971-72	State-Study 1972-73	Request 1972-73	Obligations 1973 & Beyond
SYSTEMS AVAILABLE FOR STATE-WIDE USES:							
MANKATO REGIONAL CENTER							
(Institutional)							
Personnel		$152,946		$ 168,241		$ 181,704	
Student Help		14,110		21,200		25,800	
Supplies		20,122		24,188		24,023	
Communications				3,600		3,600	
		$187,178		$ 217,229		$ 235,127	
(Regional Center)							
Personnel				$ 85,000		$ 85,000	
Supplies				40,000		40,000	
				$ 125,000		$ 125,000	
Total—Mankato Regional Center	$ 285,000	$187,178	$ 324,000	$ 342,229	$ 324,000	$ 360,127	
STATE COLLEGE COMPUTERS							
BEMIDJI STATE COLLEGE							
Personnel		$ 49,692		$ 54,661		$ 59,039	
Student Help		2,500		3,000		3,000	
Supplies		5,000		6,000		6,000	
Communications				9,188		9,188	
		$ 57,192		$ 72,849		$ 77,227	
MOORHEAD STATE COLLEGE							
Personnel		$ 43,150		$ 47,135		$ 50,907	
Student Help		3,120		3,120		3,120	
Supplies		5,288		6,000		6,000	
Communications				5,982		5,982	
		$ 51,558		$ 62,237		$ 66,009	
ST. CLOUD STATE COLLEGE							
Personnel		$112,376		$ 123,614		$ 133,507	
Student Help		4,000		4,000		4,000	
Supplies		11,000		12,000		12,000	
Communications				4,200		4,200	
		$127,376		$ 143,814		$ 153,707	
SOUTHWEST STATE COLLEGE							
Personnel		$ 54,436		$ 59,880		$ 64,686	
Student Help		2,000		3,000		3,000	
Supplies		5,000		6,000		6,000	
Communications		3,069		6,138		6,138	
		$ 64,505		$ 75,018		$ 79,824	

MINNESOTA STATE—COLLEGES—Cont'd

COMPUTER BUDGET REQUESTS 1971-73 BIENNIUM

OPERATING SUPPORT:

OPERATING SUPPORT ITEM	State-Study 1970-71	Actual 1970-71	State-Study 1971-72	Request 1971-72	State-Study 1972-73	Request 1972-73	Obligations 1973 & Beyond
STATE COLLEGE COMPUTERS							
WINONA STATE COLLEGE							
Personnel		$ 32,748		$ 36,073		$ 38,914	
Student Help		1,950		3,000		3,000	
Supplies		5,975		7,000		7,800	
Communications		3,036		6,072		6,072	
		$ 43,709		$ 52,145		$ 55,786	
Total-State College Computers		($344,340)		($406,063)		($432,553)	
Total-Less Communications[e]	$ 325,000	$338,235	$ 347,500	$ 374,483	$ 380,000[d]	$ 400,973[d]	
Total Operating Support	$ 610,000	$525,413	$ 671,500	$ 716,712	$ 704,000	$ 761,000	Total Leasing
Total Facilities and Operating Support	$1,070,850	$995,318	$1,332,850	$1,410,242	$1,469,450	$1,524,719	$1,083,188 purchase +543,011/yr. lease cost

[d]—Includes St. Cloud regional center operating support budget.
[e]—Communications costs are not included in the AIC study tables for state colleges.

MINNESOTA JUNIOR COLLEGE SYSTEM

1971-73 Computer Budgets

MINNESOTA JUNIOR COLLEGE SYSTEM

TABLE I FACILITIES REQUIREMENTS (LEASED)

ITEM	1970-71		1971-72		1972-73		Obligations Beyond 1972-73
	State Study	Actual	State Study	Board Request	State Study	Board Request	
State-Wide Use							
Time-Sharing (Ports)	$ [a]	$ 21,150	$ 22,000	$ 36,000 (22,000)[b]	$ 43,000	$ 48,000 (40,000)[b]	$ 60,000
STATE JUNIOR COLLEGE							
Terminals for Time-Sharing	[a]	15,925	23,400	18,360	40,000	18,360	27,540
Computer/Lakewood[d]	53,000	57,716	44,000	127,000[c]	73,000	127,000[c]	127,000[c]
TOTAL	53,000	94,791	89,400	181,360 (167,360)	156,000	193,360 (185,360)	214,540

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[a]—Funded through appropriation to Commissioner of Administration, of which $300,000 was earmarked for Higher Education projects.

[b]—One-third of state-wide requirements.

[c]—Includes approximately $13,000 of "Maintenance Costs" which in other reports are included in Table II "Operating Budgets."

[d]—Computer used both for instruction and administration.

( ) = As suggested by Computer Budget Advisory Committee.

MINNESOTA JUNIOR COLLEGE SYSTEM

TABLE II OPERATING REQUIREMENTS

ITEM	1970-71		1971-72		1972-73		Obligations Beyond 1972-73
	State Study	Actual	State Study	Board Request	State Study	Board Request	
State-Wide Use							
Time-Sharing	$	$	$	$	$	$	$
Communications	12,000	11,840	14,600	14,160	28,000	14,160	20,000
Operating Support	—	—	15,000	(15,000)	29,000	(26,500)	
STATE JUNIOR COLLEGE	53,000	51,897	65,000	74,831[c]	80,000	79,451[c]	105,000
Computer/Lakewood							
[a]Personnel (4)		33,890		37,598		40,413	
Student Help		5,353		7,308		7,726	
[a]Fringe Benefits		2,654		2,994		3,241	
[b]Personnel (2)				15,120		16,028	
[b]Fringe Benefits				1,811		1,971	
Supplies		10,000		10,000		10,000	
TOTAL	65,000	63,737	94,600	88,991 (103,991)	137,000	93,611 (120,111)	125,000

[a]—Present Positions.

[b]—New Positions.

[c]—Does not include maintenance costs of approximately $13,000 which are included in Table I.

( ) = As suggested by Computer Budget Advisory Committee.

MINNESOTA JUNIOR COLLEGE SYSTEM

TABLE III TOTAL REQUIREMENTS

ITEM	1970-71		1971-72		1972-73		Obligations Beyond 1972-73
	State Study	Actual	State Study	Board Request	State Study	Board Request	
Facilities	$ 53,000	$ 94,791	$ 89,400	$ 181,360 (167,360)	$156,000	$ 193,360 (185,360)	$214,540
Operating	65,000	63,737	94,600	88,991 (103,991)	137,000	93,611 (120,111)	125,000
TOTAL	118,000	158,528	184,000	270,351 (271,351)	293,000	286,971 (305,471)	339,540/yr.

( ) = As suggested by Computer Budget Advisory Committee.

MINNESOTA HIGHER EDUCATION COORDINATING COMMISSION

RECOMMENDATIONS FOR IMPLEMENTING THE HIGHER EDUCATION COORDINATING COMMISSION'S PORTION OF THE COMPUTER AND INFORMATION SYSTEMS IN HIGHER EDUCATION STUDY

In its general policy the Higher Education Coordinating Commission listed the following four developmental activities as its responsibility for planning: (1) a development center for computer-assisted and computer-managed instruction, (2) a state-wide automated library system, (3) a program of grants for projects in research and in development relating to computing in higher education, and (4) grants to private colleges in support of their computing activities.

Computer-Assisted Instruction Center

The Commission will undertake to provide computer services and other technical support for applications of computer-assisted instruction (CAI) and computer-managed instruction (CMI) as it relates to the problems of mass higher education. An appropriation of $228,500 is requested to carry out the recommendation of the Computer Study as presented on pages 4-54 and reads as follows:

> It is recommended that a statewide center be established and funded to provide computer services and other technical support to development activities in CAI and CMI at the Center for Research in Human Learning and at similar centers throughout the State of Minnesota. This center would also coordinate CAI programs and aid in their transition from research and development to operational or "production" status.

A MINNESOTA COMPUTER-AIDED LIBRARY SYSTEM

A state-wide automated library system, as recommended in the Minnesota Computer and Information Systems Study, will provide a basis for the unification of developing programs of library services for academic, research, and public libraries in Minnesota. Its objectives are:

(1) Improve access to all collections throughout the state for users and libraries.

(2) Improve service by reducing the time it takes to order, catalog, process, and locate library materials throughout the state.

(3) Increase the ability of libraries to cope with the growth of collections and the increased demands for new and better services.

(4) Better use of professional librarian's time in providing direct service to users in each library.

(5) Enable Minnesota libraries to make full use of the national library networks which are now taking form.

The state-wide program will require about eight years of progressive development divided into three stages as follows:

STAGE 1. Basic programming, determining forms and software, and some initial installation.

STAGE 2. Further expansion of data base (collections and material included) services development and functional decentralization.

STAGE 3. State-wide operations, evaluation, and modification.

The MINNESOTA SYSTEM as now envisioned would be developed through cooperation between the University of Minnesota Libraries, the Higher Education Coordinating Commission, the Cooperating Libraries in Consortium (CLIC), the Metropolitan Library Service Agency (MELSA), and the Public Libraries Section of the State Department of Education. The system would be developed and operated by the University of Minnesota Libraries, and the technical staff to operate the system would be employed as University staff. Research analysts and systems librarians representing the non-University library staffs would be needed to assist in development of the system to meet all cooperating libraries, needs. The University of Minnesota Libraries Systems Division staff with six years prior library systems experience would form the nucleus of staff, since this staff is presently the only such technical staff within a Minnesota Library.

The need for such a system can be seen through the experimental inter-library loan cooperative system called MINITEX, which is an initial stage in testing the potential use for the state-wide computer system.

The computerized library system is envisaged as eventually involving the collections of all the major libraries and library systems in the state plus the collections-in-depth of many small but specialized libraries. The use of the system would be open to all libraries of all kinds in the state, regardless of the sources of their support.

The proposed system has been under thoughtful consideration by a number of groups in the state concerned with the collection, storage and retrieval of information in many forms; i.e. print, near-print, micro-forms, and some of the newer audio-visual media. It currently carries the recommendation as a high priority from the following:

The Minnesota Assembly on Inter-Library Cooperation

The University of Minnesota Libraries

The Minnesota Library Association

The Advisory Council on Library Services (to State Department of Education under the Inter-Library Cooperation Title of the Federal Library Services and Construction Act)

and the various advisory committees on library matters to the MHECC.

An appropriation of $3,295,900 is recommended to implement year one and year two of the statewide automated library system. This includes the continuation of the experimental inter-library loan program. Cost for continued development of the state-wide library system in the 1973-75 biennium is estimated by the computer study to be $6,049,400.

A PROGRAM OF GRANTS FOR RESEARCH AND DEVELOPMENT IN COMPUTING AND INFORMATION SYSTEMS

The effective use of computers in higher education will continue to require developmental efforts by specialists versed in higher education and computer technology. The special appropriation of $300,000 by the 1969 Legislature has been most effective in stimulating the development of many useful computer applications and services in higher education. Limited and special developmental efforts should continue to be funded through an appropriation to the Commission of $350,000. To distribute these funds in the most effective manner, the Commission will continue to use the services of an advisory review panel to evaluate proposals and recommend funding, as was done with the special appropriation for the 1969-71 biennium.

GRANTS TO PRIVATE COLLEGES IN SUPPORT OF COMPUTING ACTIVITIES

Because of the importance of encouraging the development of computer activities in private colleges it is proposed that, within constitutional constraints, the state aid development of computing capacity in the private colleges. It is recommended that $105,000 be appropriated to the Commission for providing grants to the private colleges to develop computing capacity and to use regional centers and regional computer communications networks.

BUDGET FOR IMPLEMENTING THE COMMISSION'S PORTION OF THE RECOMMENDATIONS OF THE COMPUTER AND INFORMATION SYSTEMS STUDY IN HIGHER EDUCATION

	Computing Equipment		Operating Needs	
Activity	1971-72 1972-73		1972-73 1972-73	
Computer-Assisted Instruction Center	$ 74,250	$74,250	$ 40,000	$ 40,000
Grants for Research and Development			175,000	175,000
Grants to Private Colleges . .			35,000	70,000
Total for Computing in Higher Education	74,250	74,250	250,000	285,000
State-Wide Automated Library System*			1,011,400	2,284,500
TOTAL	74,250	74,250	1,261,400	2,569,500
GRAND TOTAL	$3,979,400			

*Includes continuation of the experimental inter-library loan program (MINITEX)

APPENDIX N

GUIDELINES FOR PROGRAM REVIEW

I. Introduction

The Minnesota Higher Education Coordinating Commission can best fulfill its responsibility of developing plans and programs to meet the post-secondary educational needs of Minnesota by becoming involved in the program development process. The Commission adopted a report titled, "Program Review and Coordination" (copy attached) at its September 1968 meeting. The September report is the background document upon which the Commission will build its efforts during the coming biennium. It contains the rationale for program review and the recommendation that the 1969 Legislature specifically direct the Commission to review and express approval or disapproval of all new programs of instruction to be established in public post-secondary institutions in Minnesota. Although the legislature did not amend the statutes specifically to add this responsibility, it is clear that this activity can be started under the original charge of the legislature to the Commission.

In order to have a common understanding in regard to program review, *a program is defined to include any sequence of courses, activities, or experiences which will lead to a degree or certificate, which will be recognized or described as providing preparation for a vocation, or which will serve as a field of specialization or an area of concentration, such as a major or minor field in a broader degree program. The term as defined for this purpose also includes any new program unit such as an instructional division or department.* Usually a course is one of several activities or experiences which, in combination with other courses, becomes part of a program. In these terms, the Commission will not review individual courses. A program will be considered to be new if it is not currently offered by the proposing institution (even though it may have been offered at some earlier time) or if it is to be offered at a new or different campus or location.

The concept of program review rests upon the need to allocate state resources in the most effective manner. An institution should willingly avoid developing new programs of instruction which are already in existence and meeting the needs of the state or region. Conversely, if no institution is conducting a needed program, the Commission will encourage the most appropriate institution to consider the needs and determine if it can reallocate its resources to include its involvement in this new area. Certain programs with very small enrollments or highly technical in nature may be offered at only one institution. On the other hand, the needs of the state may require the development of other programs at several or all institutions.

Understanding and mutual respect must prevail in the process of program review. Information concerning curricular offerings in the state must be developed to assist the individual institutions and systems in their planning efforts. Institutions do not deliberately develop programs which they think will fail, waste resources or duplicate programs at other institutions. Errors are occasionally made, but this is more likely due to lack of information concerning the programs that already exist in Minnesota or the plans of other institutions or systems in developing new programs. With this in mind, one of the basic purposes of a program review procedure will be to provide information concerning current curricular offerings in the state and plans of institutions to develop new programs.

One of the first efforts that the Commission will undertake is to develop a comprehensive program inventory of the offerings of the public post-secondary institutions in Minnesota. A supplementary, but, necessarily, something different effort, will be made with the private colleges in Minnesota to establish an understanding of their existing offerings and future plans. An effective program review procedure cannot be undertaken without an understanding of what is currently offered. Once current offerings are inventoried, areas of need and unwarranted duplication can be identified. When an institution is considering the possibility of offering a new program, an effective inventory will provide basic data to assist it in determining whether or not it should proceed with its plans.

After a comprehensive program inventory is developed, the Commission will be in a better position to react to program proposals from the various institutions. The Commission will be in a position not only of discouraging additional efforts in certain areas, but, more importantly, of encouraging the development of new programs where sufficient unmet needs exist. It is well to underline here that the Commission's position will be to persuade, encourage and provide information rather than to develop a posture of disapproval, bureaucracy and red tape. Program review must be a developing process. While procedures can be refined later, the following can provide a sound basis for the process initially.

II. Procedures for Proposing New Programs

A. Preliminary Notification

1. Purpose: The primary purpose of this preliminary notification is to provide the Commission with information which it in turn can forward on to the

various systems of post-secondary education in Minnesota. It is very possible, when a particular educational need develops in the state, several institutions of post-secondary education may work simultaneously on the planning of new programs to meet the identified need. Another purpose of this preliminary notification is to alert the Commission to the plans of a particular institution in an area in which the Commission may have information which may be helpful to the institution planning the new program. Since preliminary notification is intended to provide information about program developments which are being given serious consideration, it does not assume commitment to undertake the program by an institution or approval of the program by a governing board. ("Governing board" refers to the Board of Regents, State College Board, State Junior College Board, and Board for Vocational Education.) Preliminary notification *does* assume authorization by the governing board for transmitting the preliminary notification. While each of the four boards will establish its own procedure, the Commission would prefer that preliminary notification be transmitted through the board office, rather than directly from the individual institution to the Commission.

2. Content: This preliminary notification will not have to be in any specific form and it can contain as little or as much information as the institution desires, but it should at least focus on the following:

(a) The need of the new program;

(b) The objectives of the new program; and

(c) A preliminary estimate of the number of students to be involved and the number of faculty members required during the first year of the program's operation.

3. Time Schedule: A preliminary notification should be forwarded to the Commission as soon as an institution decides to give serious consideration to a particular curricular area. If the preliminary review by the institution suggests that the action is desirable, a formal proposal should be developed. The Commission should be informed, on the other hand, if the institution, on the basis of its preliminary review, decides to go no further with the development of a formal proposal.

B. Formal Proposal

1. Purpose: The primary purpose of developing a formal proposal is to produce in one document all the necessary information needed to make a sound decision concerning a proposed curricular offering.

2. Content: The formal proposal, unlike the preliminary notification should have tentative approval of the institution's governing board or appropriate board committee. A formal proposal may include any information which would be useful in understanding the nature and implications of the proposed development and should include a description of the following:

(a) Need for the program and firm data to establish this need;

(b) The program objectives;

(c) The content of the program;

(d) Number and type of students to be served initially and five years after the inception of the program;

(e) Relationship of the proposed program to existing programs at the offering institution and any other similar programs offered in the state in both public and private institutions;

(f) Additional faculty members needed during the first year of operation and five years after its inception;

(g) Equipment which will be needed to initiate the program and during the five year period after its inception;

(h) The indication of any additional laboratory facilities needed to initiate the program and during the five year period after its inception;

(i) A specific indication that existing library holdings and the current level of support will be sufficient to establish and maintain the new program or an estimate of the additional cost of obtaining sufficient library holdings to initiate the program;

(j) Total estimated costs for establishing the program initially and on a five year basis; and

(k) Suggested sources for any additional funds required to establish the new program.

3. Time Schedule: Formal proposals will be considered by the Commission in accordance with the following schedule:

(a) Proposals received by September 1 will be considered at the October meeting;

(b) Proposals received by December 1 will be considered at the January meeting;

(c) Proposals received by March 1 will be considered at the April meeting; and

(d) Proposals received by May 1 will be considered at the June meeting.

III. Review Procedures

A. Staff: The staff of the Commission will receive all formal proposals. It will be their responsibility to determine if sufficient information is provided and obtain from the proposing institution any additional information needed. They will assemble all proposals and take the necessary steps to insure each proposal is reviewed in accordance with the procedures established by the Commission.

B. Curriculum Advisory Committee: This committee will include three representatives from each of the four public systems and three selected by the Private College Council. The representatives of the public systems will be selected by the system. The representatives selected must be working in the area of curriculum planning. This committee will review all formal proposals received by the Commission. It is this committee's responsibility to consider all pertinent factors and make a recommendation to the appropriate Commission committee. If this committee or any other group in the program review process desires additional information, they will request the staff of the Commission to obtain it.

C. Commission Committee: The appropriate committee of the Commission will review and make a recommendation to the full Commission regarding each formal proposal.

D. Commission: The final responsibility for taking action on each proposal will rest with the full Commission.

E. Review Criteria: Each proposed program will be judged in terms of the following basic criteria:

1. The extent to which the proposed program is consistent with the mission of the institution offering the program. Mission is defined in this context by the statement of "institutional missions" in the *Proposal for Progress* (HECC, January 1969) or by such subsequent modifications to institutional mission statements as may be made from time to time.

2. The extent to which the proposed program duplicates existing programs or other proposed programs and whether the extent of any duplication is desirable.

3. The relative cost-benefit of the proposed program as viewed in terms of the total needs of higher education and the probable availability of funds to meet the total needs. The Commission will look with special favor and will accord high priority to programs which demonstrate cooperative planning among institutions or systems. It will view with special regard those programs which involve inter-institutional offerings or which allow for the ready transfer of program components from one institution or one system to another.

F. Notification: When the Commission has taken specific action on a proposal the initiating institution will be notified by the staff of the Commission.

IV. Participation of Private Institutions

In order that the plans of private colleges and universities may be taken into account in assessments as to the desirability of proposed programs in public institutions and in order that private colleges and universities may benefit from the coordinated review of plans for new instructional programs, the opportunity to participate in program review is extended to private colleges and universities in Minnesota with the following conditions and limitations.

A. If a preliminary notification is submitted by a private institution in the manner described in Section II, plans for the proposed program will be noted, future availability of the proposed program will be taken into account in assessing the desirability of proposed programs in public institutions, and the program will be included in public reports of the Commission to the legislature and post-secondary institutions on program developments in Minnesota higher education.

B. If a formal proposal is submitted by a private college or university in the manner described in Section II, the proposal will be reviewed and commented upon by the Commission staff, the Curriculum Advisory Committee, and the Commission committee as described in Section III; in addition to the benefits accruing to the submitting institution from comments and questions emanating from the review procedure, submission of the more complete information required in the formal proposal will provide a better basis for including plans of private institutions in reviewing proposed programs in public institutions.

C. The Commission will not ordinarily take action expressing either approval or disapproval of programs proposed by private colleges and universities.

V. Complete Statement on Program Review

The Commission's complete statement proposing program review, as presented in Appendix B (pages 68-72) of *Proposal for Progress,* is attached.

Source: *Proposal for Progress: Guidelines for State Policy and Comprehensive Planning of Post Secondary Education* (Minnesota Higher Education Coordinating Commission, January, 1969)

PROGRAM REVIEW AND COORDINATION

This statement concerns the recommendation that plans for new programs to be instituted by public post-secondary institutions should be presented in advance to the Higher Education Coordinating Commission for review. Since the suggestion would involve extending or expanding the Commission's present responsibility, it might be useful to consider the question of program review in terms of its relevance and appropriateness to the concept of coordination, particularly coordination by a "coordinating agency."

The growth and increasing complexity of post-secondary education, along with general agreement on its importance to the well-being and progress of both the individual and society, have stimulated recognition that a state has an interest in higher education which extends well beyond an interest in individual institutions or systems of institutions. This recognition has led to efforts to provide more effective coordination of higher education, usually (in recent years) through establishing an agency which has as its primary purposes (1) coordinating higher education institutions and activities in a state, (2) planning for the meeting of present and future needs for the services of higher education on a comprehensive and statewide basis, and (3) maintaining some statewide programs which are relevant to all or most institutions in a state.

In most instances, emphasis has been placed upon coordination, with planning and maintaining statewide programs being viewed as necessary or desirable related activities. While a coordinating agency may be described as bringing about coordination, it is more likely that establishing a coordinating agency provides for a more rational basis and a more systematic approach to coordination and, hopefully, more desirable results, both in effectiveness of the total program of higher education and in economy of effort. That some kind of coordination takes place in the absence of a coordinating agency is evident:

> Coordination takes place whether or not a formal structure for it exists. In the absence of a coordinating board, decisions and allocations are made by the governor, by the legislature, or by a state agency that has some primary function other than higher education. An effective coordinating board offers the advantage of providing a balanced view of the needs of the state and the resources of the state.[1]

Three earlier movements aimed at providing more effective coordination of higher education preceded the more recent trend of establishing formal state coordinating agencies: (1) the single governing board, (2) informal voluntary coordination, and (3) grouping institutions under a small number of governing boards.

The first movement aimed at more effective coordination of higher education appeared with the establishment of single governing boards charged with responsibility for operating all public institutions within a state. While 13 states established single boards of control before 1940, it has been observed that "the movement, if such it could be called, toward 'one big board and no others' had practically spent itself by 1940."[2] Both Arizona and New Jersey established single governing boards in 1945, but no other state has followed the earlier trend since 1939. In more recent years, opposition to the single governing board concept has been reported frequently.

> The failure recently of the single board concept to gain acceptance among the states as the agency for statewide coordination is attributed chiefly to the general aversion to rigid centralization and also to the preference for the coordinating board. As noted, the threat of establishing 'one big board' has been the primary factor in the creation and maintenance of the voluntary systems. The single board has been vigorously opposed by most educators who see a leveling and averaging of all institutions under its control.[3]

For a time, it appeared that coordination could be accomplished through informal voluntary arrangements with no statutory basis. However, only Indiana and New Hampshire continue to strive for coordination through voluntary arrangements, while all other voluntary arrangements have been replaced with a statutory coordinating agency. Many serious students of higher education, including T. R. McConnell, have reluctantly reached the conclusion that voluntary arrangements do not adequately meet the need for coordination.

> I have come reluctantly to the conclusion that voluntary coordination is inadequate and ineffective. I am in favor of the greatest possible degree of institutional autonomy, and I deplore the kinds of detailed regulations and controls that are increasingly being imposed externally on public institutions by govern-

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[1] Otis Singletary and Harry A. Marmion "Higher Education" in Frank Smothers (ed.) *The Book of the States* (Chicago: The Council of State Governments, 1968), p. 295.

[2] M. M. Chambers, *Voluntary Statewide Coordination in Public Higher Education* (Ann Arbor: University of Michigan, 1961), p. 60.

[3] Lyman A. Glenny, "State Systems and Plans for Higher Education" in Logan Wilson ed. *Emerging Patterns in American Higher Education* (Washington: American Council on Education, 1965), p. 90.

mental agencies and internally by their own administrations. Nevertheless, I am convinced that the essential outlines of the development of public institutions and public systems of higher education must be subject to the sanction of a coordinating body and responsive to an agency charged with planning a comprehensive statewide educational program.[4]

The third general coordination movement took the form of grouping several institutions, usually institutions of similar type or institutions within a specified geographical area, under one governing board. This approach reduced the number of public governing boards to a total of something between two and five and was often more favorably received than was the single governing board approach. Some weaknesses of relying upon boards which govern a number of institutions without a single statewide coordinating agency were reported in a 1960 U. S. Office of Education study, as follows:

> The question then arises: What organizational pattern should be adopted where large numbers of institutional units exist now or are likely to develop in future years?
>
> One possibility is to create a series of governing-coordinating boards, each over a number of institutional units. This has occurred in Minnesota, Oklahoma, Virginia, Wisconsin, Texas, and Utah. These states, however, have created statewide coordinating boards over all governing or governing-coordinating boards, with the exception of Minnesota. (Note: The Higher Education Coordinating Commission had not as yet been established at the time of the U. S. Office of Education study.) This suggests that a plan of systems of colleges under autonomous or uncoordinated governing-coordinating boards may be less than fully effective in meeting the total educational needs of a state. For one thing, it may leave gaps in the effort toward coordination because of the location or variety in number of institutions under the board. Another result might be the development of 'educational empires' which contribute actually to a greater need for coordination.[5]

The "ideal" arrangement as recommended in the U. S. Office of Education study is as follows:

> If a fresh start could be taken in a state having nine or more public colleges, the authors would argue for a system to place each institutional unit, whether a two-year college or a four-year institution or a complex university, under its own governing board, and over this board, a statewide coordinating board with major duties of interinstitutional programming, budget coordination, and long-range planning.[6]

The above recommendation for the "ideal" arrangement suggests that a coordinating agency should have responsibility in the areas of programs, budget, and planning. This concept of the appropriate functions for a statewide coordinating agency would appear to have been generally accepted and widely implemented. A very recent report presents the observation that, while functions which are performed by coordinating agencies in order to accomplish coordination of higher education are varied, "certain functions appear to be in some degree common to all: program review, budget review, and long-range planning."[7]

If a coordinating agency is to meet the need for coordination more appropriately and effectively than would the arrangements which emerged in the three earlier movements toward coordination, the responsibilities of the coordinating agency must be defined in such a way as (1) to avoid centralized control and uniformity which make a single governing board for all institutions an unacceptable approach, (2) to provide the comprehensive concern which extends beyond the concern of any governing board which controls several, but not all, publicly-supported institutions, and (3) to achieve greater effectiveness than has been demonstrated under informal, voluntary coordinating arrangements. In brief, the powers of a coordinating agency must be sufficiently limited to assure autonomy in the operation of institutions, but a coordinating agency must have enough responsibility to assure that it coordinates in fact as well as in name. If a coordinating agency has too much power, it may assume a role which should be reserved for governing boards. If it has too little responsibility and authority, it may never focus meaningfully upon matters which determine the direction of developments among the several components of higher education, and the burden of coordination will continue to fall upon the legislature or other state agencies. To many who engage in the study of higher education, program review, budget review, and long-range planning represent both the minimum and the maximum limits of responsibility and authority which are desirable and appropriate for a coordinating agency, while others contend that such an agency also should "be given the authority to approve or disapprove major proposals for the construction or conversion of educational buildings."[8]

It is through the conducting of activities which comprise programs that educational institutions execute or implement their respective missions. Such programs comprise three general functions of higher education — instruction, research, and public service — each of which may be performed to some degree by any post-secondary educational institution, depending upon the mission of the institution and the availability of resources.

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[4] T. R. McConnell, "The Coordination of State Systems of Higher Education" in Logan Wilson ed. *Emerging Patterns in American Higher Education,* p. 140.

[5] S. V. Martorana and Ernest V. Hollis, *State Board Responsible for Higher Education,* U. S. Office of Education, Circular No. 619, (Washington: Government Printing Office, 1960), p. 49.

[6] S. V. Martorana and Ernest V. Hollis, p. 49.

[7] Otis Singletary and Harry A. Marmion, p. 295.

[8] T. R. McConnell, p. 139.

In Minnesota higher education, the structure for coordinating program developments is well defined for four groupings of public institutions. The University Board of Regents coordinates programming for four campuses under its control; the State College Board coordinates the six institutions for which it has operational responsibility; the State Junior College Board approves and coordinates programming in 17 institutions; and the State Board of Education coordinates programming in 26 area vocational-technical schools. However, the only authority for coordinating programming among the four components or systems of public post-secondary education rests with the State Budget Division and the legislature as part of the budgeting process. Whatever program coordination which occurs as part of the budgeting process tends to be both indirect and incomplete. Budgets of area vocational-technical schools are not reviewed, and there is no systematic procedure for assessing program duplication or compatibility as part of the budgeting process.

Not all new programs are specifically proposed as new programs in the budgeting process. The exceptions in the present structure are that any institution for which aid is desired for supporting terminal vocational or technical programs must have such a program approved by the State Board of Education, an institution need not secure this approval if no aid is requested, and programming plans may be presented for information and discussion to the Higher Education Coordinating Commission. Presentation of plans to the Commission is not required and tends not to be customary. The absence of agreement on any responsibility of the Commission to review program plans makes presentation to, and discussion by, the Commission somewhat awkward.

The present arrangement clearly provides no structure for effective program coordination. Also related is the question of the extent to which the Commission can exert a positive and useful influence on Minnesota post-secondary education, unless the Commission's responsibilities are defined in such a way as to focus attention more directly upon emerging activities of institutions and the direction of institutional efforts. The Commission will be best able to fulfill its legislative charge to develop plans and programs to meet the needs of the people of the state for higher education, when it is informed about and involved with the program plans of post-secondary educational institutions. Unless Commission responsibilities include program review, the danger exists that, while the Commission concerns itself with larger and certainly important questions, those policy matters which most directly affect the future of post-secondary education and its service to the people — program planning and budgeting — will continue to be decided by the four public boards of control, the Budget Division, and the legislature, and the Commission will have relatively little influence upon what really happens in Minnesota higher education.

The general need for mandatory program review as a basis for effective coordination has been summarized as follows:

> It seems axiomatic that no state now possesses or will acquire resources that would justify the unnecessary duplication of costly forms of specialized education. It is also increasingly evident that the unnecessary duplication of educational programs can only lead to educational enfeeblement . . . I can only conclude that there should be some differentiation of responsibilities among public higher education institutions and a distribution or allocation of programs relevant to these functions. This would, in turn, seem to entail efficient allocation of financial resources if educational opportunities of appropriate scope and quality are to be provided for the growing proportion of young people who will continue their formal education beyond the high school. Purely voluntary coordinating agencies are likely to be basically inadequate to this complex task. Five years ago there may have been some exceptions to this generalization. Today there are few, if any.[9]

There seems little doubt that coordination of program offerings is essential to effective coordination of higher education. It also would seem that the functions of program planning and review are consistent with the basic charge to the Commission and that responsibility for reviewing new programs would facilitate the Commission's focusing more directly and more effectively upon the real substance of Minnesota higher education. Program review has become a typical function of coordinating agencies.

While responsibility for program coordination usually is defined to include programs which comprise all three functions of higher education (instruction, research, and public service) it is recommended that, while the Commission should be concerned with the proportion of institutional effort to be devoted to each of the three basic functions and with similar matters which relate to institutional missions, the Commission should, at least for the immediate future, have responsibility for reviewing and approving only those new programs which comprise the function of instruction. Instruction is the largest of the three functions, in terms both of cost to the state and service to the people. Limiting the responsibility only to review of instructional programs would reduce the burden upon the Commission and probably would facilitate effective performance of the new responsibility.

While the Commission could assume responsibility for program review as part of its charge to study higher education and to develop plans and programs to meet the needs of the state, provided that the four public boards of control were to cooperate, a more straightforward approach would be to amend the legislation to assign the new responsibility to the Commission. Therefore, it is recommended that the Commission propose the introduction and passage by the 1969 Legislature of a bill which amends Minnesota Statutes 136A.04 by adding subsection (d) to read as follows: *"review and express approval or disapproval upon all plans and proposals for new or additional programs of instruction or substantial changes in existing programs to be established or offered by or in the University of Minnesota, the State Colleges, the State Junior Colleges, and public area vocational-technical schools, and periodically review existing programs offered in or by the above institutions and to recommend discontinuing or modifying any existing program, the continuation of which is judged by the Commission as not being in the best interests of the state; the Commission, in its biennial report to the legislature, shall indicate those programs which have been approved, disapproved, or established and continued without Commission approval."* While this amendment would not legally prohibit the establishment of a new program without approval by the Commission or infringe upon the constitutional immunity of the University Board of Regents or upon any legal rights of other boards, it would establish legislative intent that programs be reviewed and coordinated by the Commission.

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[9] T. R. McConnell, p. 138.

Generally, the Commission should be concerned with reviewing plans for new programs rather than with judging the need to continue existing programs. The provision providing for the possibility of recommending that programs be discontinued is included primarily to assure success of the new program review procedure. The need for the opportunity to discontinue existing programs in reviewing proposed new programs has been clearly explained by Professor McConnell:

> A coordinating board should also have the authority to discontinue educational programs. Such power may save the board from being confronted, as is now often the case, with what amount to a *fait accompli,* that is, with a request to give approval to a *program* or *curriculum* on the grounds that the institution already offers all or nearly all the necessary *courses.* If the authority to discontinue programs does not control this sort of academic one-upmanship some continuing review of course offerings may become essential.[10]

In implementing the responsibility for program review, the Commission should encourage plans to be presented as early as possible in order that those involved in planning not waste effort needlessly. This can be accomplished through a procedure for a preliminary review as a result of which the Commission should either (1) encourage continued planning and submission of a proposal for final review, or (2) indicate reservations which may cause the Commission not to grant approval at the time of final review.

For preliminary review, the institution or board which proposes a new program should be expected to provide only minimal information, such as the need for the program, the general nature of the program, the scope of the program, and the kinds and levels of students for which the program will be intended. For final review, program proposals should include information about:

1. Need for the program.
2. Program objectives.
3. Program content.
4. Number and kinds of students to be served initially and as the program is developed.
5. Relationship of the program to existing programs.
6. Staff, equipment, and facilities which will be needed to initiate the program and to maintain the program in future years.
7. Estimated cost for establishing and maintaining the program.

In reviewing program proposals, the Commission should attempt to assess and should base action upon consideration of:

I. The extent to which the proposed program is consistent with the mission of the institution by which the program is to be offered. This implies that the Commission will either agree to the mission, or role and scope, of an institution as determined by the institution, or its governing board, or recommend some redefinition of the mission.

II. The extent to which the proposed program duplicates existing programs or other proposed programs and whether the nature and extent of any duplication is desirable.

III. The relative cost-benefit of the proposed program as viewed in terms of the total needs of and for higher education and the probable availability of funds to meet total needs.

For purposes of program review, "program" should be defined to include any sequence of courses, activities, or experiences which will lead to a degree or certificate, which will be recognized or described as providing preparation for a vocation, or which will serve as a field of specialization or an area of concentration, such as a major or minor field, in a broader degree program. The term as defined for this purpose should also include any degree or certificate and any program unit such as an instructional division or department. Usually a course is one of several activities or experiences which, in combination with other courses, becomes part of a program. In these terms, the Commission should *not* review courses.

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[10] T. R. McConnell, p. 139.

A program should be considered to be new if it is not currently offered by the proposing institution, even though it may have been offered at some time in the past, or if it is to be offered in a new or different campus or location.

APPENDIX O

STATE-WIDE CURRICULUM STUDY RESUME AND RECOMMENDATIONS

BACKGROUND

The 1969 legislature directed the Coordinating Commission for Higher Education to make "a statewide curriculum study involving the University of Minnesota and the state and junior college systems directed toward cooperative planning and development of undergraduate instructional systems." In carrying out this charge the Commission designed a curriculum study that included all post-secondary institutions in Minnesota. The purpose of considering all vocational-technical schools and private institutions with the University, and state colleges and state junior colleges is to achieve a comprehensive picture of Minnesota higher education.

A curriculum study design was prepared to focus on three major areas: survey all educational programs currently being offered, review all education programs being proposed for the immediate future, and survey students transferring among Minnesota institutions. The section on existing programs is called "Minnesota Programs in Higher Education," the second section is titled "Reviewing New Educational Programs," and the final section is named "Transfer Study."

INSTRUMENTS

The principal instrument to gather information for the first two parts of this study is the *Minnesota Program Inventory*. In addition to providing a composite picture of total Minnesota post-secondary offerings, the Inventory is also intended to give useful information in support of planning and review procedures of all *new* programs. The framework of the Inventory has been taken from a format provided by the United States Office of Education in its *Higher Education General Information Survey* (HEGIS) with additional entries made, where necessary, to accommodate specific program areas within Minnesota institutions.

Although the systems and institutions reporting the requested information gave almost total coverage of their program offerings, there were some unavoidable omissions from the Inventory. The Inventory does not include those programs offered at private occupational schools, nor does it include that area of courses in the state junior colleges usually associated with "general studies."

The transfer study employed two survey instruments, *Minnesota Transfer Students' Opinion Survey Form* and *Transfer Students' Grade Point Average Survey Form*, to elicit information about grade-points, students' choices and goals, articulation, and reasons for transferring. The study surveyed collegiate registrars to obtain information about grade-point averages. The study also distributed a mail questionnaire, without follow-up, to more than 5,000 transfer students identified by collegiate registrars. The brief instrument contained questions about student choices, reasons for transferring, problems encountered, and the timing of decisions to transfer. Only about half of mail recipients returned usable responses and response rates varied considerably between systems.

MAJOR FINDINGS

I. MINNESOTA PROGRAMS IN HIGHER EDUCATION

A. Kinds and Number of Programs

1. The 741 occupational programs represent a tremendous effort on the part of post-secondary education to maximize educational opportunities for the citizens of Minnesota. Likewise, the 904 baccalaureate and 289 master's programs offer a rich variety of education. The doctor's programs, although offered at only one institution, present a surprisingly large number of programs (78).

2. Occupational programs are offered in every type of institution in Minnesota: vocational-technical schools (532), state junior colleges (151), state colleges (28), University (21), and private colleges (9).

3. Programs in fields of mechanical and engineering, and business and commerce make up the bulk of all occupational programs. There are relatively few programs in the fields of data processing and public service. As might be expected, the vocational-technical schools and junior colleges are most deeply involved in occupational education.

4. In the baccalaureate fields the private colleges (470) offer the greatest variety of programs, followed by the state colleges (270) and the University (164). The private colleges have the greatest concentration of programs in social sciences, foreign languages, fine and applied arts, and education; state college programs concentrate on education, social sciences, business and commerce, and fine and applied arts; the University has the greatest number of programs in education, social sciences, foreign languages, and engineering.

5. Of the 16 institutions offering 289 master's programs in 187 program areas, the state colleges offer 159, the University offers 107, and private colleges offer 23. The state colleges have the most programs in education (67). The private colleges do not emphasize graduate education.

6. Although the University offers 78 doctoral programs, none are offered in 9 of the 27 fields listed in the Inventory.

7. Minnesota institutions do not offer first professional programs in podiatry, optometry, or osteopathy.

B. Distribution of Programs

1. Minnesota post-secondary educational institutions are distributed in such a way as to give full access to as

many Minnesota residents as practical. The only exception appears to involve Red Wing, assuming that the other state junior colleges recommended to the 1969 Legislature are also implemented.

2. The greatest concentration of occupational programs nearly matches the population concentrations within the planning regions. Some notable exceptions are: i) region 2 has no occupational programs in three of the six fields and only one program in another field; ii) four of eleven regions have no programs in data processing and three regions have none in public service; iii) over half the programs in public service are concentrated in region 11 and over two-thirds of the health service and paramedical programs are located in three regions (3, 10 and 11).

3. Vocational-technical schools offer more occupational programs in each region than all the other types of institutions combined; state junior colleges concentrate most of their occupational programs in regions 11, 3 and 10, and the private sector concentrates its few offerings in a junior college in region 11.

4. Regions 10 and 11 have more than 50 per cent of all baccalaureate programs offered in Minnesota; three regions (1, 5, and 6) have no programs, with regions 2, 8, and 3 offering together only 14 per cent of the total. Of the 32 institutions offering 904 baccalaureate programs, 164 are offered on four University campuses, 270 at six state colleges, and 470 at 22 private institutions. Private colleges concentrate over 70 per cent of their efforts in regions 10 and 11; state colleges are the only source of baccalaureate opportunities in regions 7 and 8; and the University offers two-thirds of its programs in the Twin Cities.

5. The greatest duplication of programs in most communities invariably involves separate efforts of the different types of institutions, particularly the private and public sectors of education.

C. Graduates Produced

1. Of the 3,998 two-year degrees conferred during the 1969-70 year, the junior colleges granted 3,184. Of the 18,038 baccalaureate degrees granted, the state colleges and the University of Minnesota each granted more than the private four-year colleges. Of the 2,582 masters degrees granted, the University conferred more than the state colleges, private colleges, and the private professional schools together. Of 785 professional degrees given, the University granted over 60 per cent. The University granted all of the 546 doctorates. The total number of degrees conferred (25,949) showed an increase of 2,155 over the 23,794 degrees granted during the previous academic year.

2. Some baccalaureate program fields have more than 100 graduates. Among them education has the most graduates followed by social sciences, business and commerce, and English and jouralism. Many program fields have produced few graduates: eleven of twenty-seven fields have produced less than 1 per cent of all degrees granted; and five fields have produced more than 70 per cent.

3. Five master's degree program fields produced more than 70 per cent of all degrees granted: education, social sciences, health professions, engineering and biological sciences. As with baccalaureate degrees conferred, eleven of the twenty-seven fields have each produced less than 1 per cent of all degrees granted.

4. At the baccalaureate level the University averaged twice as many degrees per program as the state colleges, even though the state colleges gave twice as many as the private institutions. At the master's degree level, the state colleges averaged half as many graduates per program compared to the University and private colleges. Surprisingly, the average of graduates per program at the doctor's level was only slightly less than at the master's level.

D. Kinds and Number of Program Omissions

1. Program omissions exist at every level of higher education in the state. Of the 244 programs in occupational areas, 33 were not offered by any Minnesota institution; 93 program areas had only one institution offering a program within Minnesota. Of the 232 baccalaureate programs, 60 were not offered by any Minnesota institution.

2. The Minnesota population is divided quite unevenly by planning regions, region 11 having almost half the population. When the relative size of each region is compared to the number of different programs within this region, the pattern of program omissions appears to be proportionate. Some exceptions, however, do stand out: regions 7 and 3 have many occupational omissions for their populations; although region 11 has the fewest occupational omissions, the 102 program omissions still seem to be high for this dense population area.

3. No baccalaureate programs are offered in three sparsely populated regions. Region 11 is comprehensively covered, with regions 4 and 7 a distant second and third.

E. Kinds and Number of Program Duplications

1. Occupational programs, particularly in accounting, general clerical and secretarial, and general welding, are offered by a large number of institutions.

2. A number of baccalaureate programs in liberal education are offered by almost all institutions throughout the state; general biology, English, art, music, speech, French, German, mathematics, chemistry, general psychology, history, political science, and sociology

are offered by more than two-thirds of Minnesota colleges and universities.

3. Duplication of programs at the professional and doctoral levels does not present a problem in Minnesota because most are offered by only one institution. At the master's level 299 master's programs are offered in 141 program areas with some duplication in most areas. However, private colleges concentrate most of their master's programs in regions 10 and 11, and thus they duplicate many programs among themselves and the University of Minnesota. However, this report cannot judge whether these duplications are unwarranted.

4. In those planning regions (particularly 1, 9, 8 and 5) where few program areas are represented, there are proportionately few programs, and where many different program areas (regions 11, 3, 10, 6 and 4) are represented, the largest concentration of duplicated programs are found.

5. Where different types of institutions are located in the same planning regions (particularly regions 10, 11, 4, 7, and 9) many duplicated programs are present.

II. REVIEWING NEW EDUCATION PROGRAMS

A. Overview

1. As of September 28, 1970, a total of 184 new academic programs had been submitted for program review. One hundred six of these were formal proposals for new programs, and two more were formal proposals for new institutions. The remaining 76 proposals were preliminary notifications about new programs still in the planning stages. Three of these later appeared as formal proposals.

2. The Curriculum Advisory Committee received the 76 preliminary notifications of programs which may be submitted as formal proposals in the future. The Commission does not act on preliminary notifications.

3. The Curriculum Advisory Committee found 102 of the formal proposals to be in compliance with the criteria in "Guidelines for Program Review." Favorable reviews were given to Southwest Minnesota State College and Inver Hills State Junior Colleges for their reports and plans as new institutions in the process of implementing programs. The Committee denied one formal proposal and three others are pending after temporary deferrals.

4. The Commission found 100 formal proposals to be in compliance with the Guidelines, accepted the two proposals for new institutions, and supported the denial of one formal proposal. Planning Committee A of the Commission has deferred for further study two of the formal proposals recommended by the Curriculum Advisory Committee.

B. Commission Action on Formal Proposals

1. Graduate programs constitute 25 of the 100 formal programs, eight being submitted by state colleges and 17 by the University of Minnesota. Of the 17 submitted by the University, five were doctoral level programs.

2. Action has been taken on 30 formal proposals at the baccalaureate level, seven from the University and 23 from state colleges.

3. Action has been taken on 45 formal proposals culminating in either an associate degree, a certificate, or both, with 19 from state junior colleges and 26 from area vocational-technical schools.

C. Action to Defer, Table, or Deny Formal Proposals

1. Programs deferred by the Commission staff constitute 12 of 21 formal proposals returned to the submitting offices for more information. Of the nine remaining programs, the Curriculum Advisory Committee deferred five, the Planning Committee A of the Commission deferred two and the Curriculum Advisory Committee tabled the remaining two.

2. The Curriculum Advisory Committee accepted the recommendation to deny the formal proposal submitted by the University of Minnesota for a Ph.D. in Arabic.

3. Action is still required on the two specialist programs (Education Administration and Curriculum and Instruction), the two associate of arts degrees from the state colleges (Law Enforcement and Criminal Justice and Training of Law Enforcement Personnel), and the program from Rainy River Junior College (Audio Communication: Radio Broadcasting).

4. The submitting institutions of the remaining 12 deferred programs have satisfactorily supplied the missing information and have subsequently been found by the Commission to be consistent with the guidelines used in program review.

D. Preliminary Notifications

1. Graduate programs constitute nine of the 76 preliminary notifications, seven being submitted by the University of Minnesota and two by the state colleges. Of the seven submitted by the University of Minnesota, two were at the doctoral level.

2. Three baccalaureate level preliminary proposals have been submitted, two by the University of Minnesota and one by state colleges.

III. TRANSFER STUDY

A. Transfer Movement

1. Students were apparently on the move. In 1969 more than one student in ten transferred between sys-

tems. And this finding prescinds from drop-outs and transfers within a system.

2. If there is any validity in projecting the 1969 experience over the four year, freshman-to-senior range, then the state's 78 thousand undergraduates contained over 35 thousand students who had transferred at some time, or 45 per cent of the state student body—again not counting drop-outs and transfers within systems. Transferring seems to be the greatest of all student movements.

3. The reasons for this lemming-like movement cannot be considered fully explored at this time. Overwhelmingly, the reasons given were "personal" and "other." What these signify could not be determined. Perhaps movement must be accepted as a fact of life among contemporary students. But anyone who judges the magnitude of the movement to be a major problem should logically seek further study and analysis of it.

4. "To finish a degree" was a second major reason. Appropriately, it mainly affected transfers from junior colleges and to state colleges and the University. Nevertheless, it affected only a minority (about one-third) of the "student movement."

5. Financial reasons for transferring was only the third important reason, yet it was pinpointed in specific areas, particularly among students leaving private colleges, or going to AVTS's. Therefore, anyone who considers the movement to be a problem should logically study means of assisting those students who transfer for financial reasons. This especially refers to help for the mass of students going from private colleges to state-supported schools.

6. Finally, late determination of goals characterized certain groups of transfers: those going to junior colleges and AVTS's, and those leaving private colleges. Transfers by these students are not merely part of the movement problem: late goal determination may partly explain what was meant by "personal" reasons. In addition, it may have been related to time problems. As such, it creates wastage of state resources and of individual talent. This situation highlights the need for early academic counseling to help students avoid false starts.

B. **Importing Students**

1. The magnitude of the transfer movement was accounted for in large part by college students who enter Minnesota institutions from out-of-state. Although no data were available on egress and ingress of Minnesota residents, imports still accounted for a surprisingly large share of transfers, more than one in three.

2. If it is valid to project the 1969 experience over the four-year college period, then the state's 78 thousand undergraduates contained over 12 thousand students who were imports at some time, or 15 per cent of the total student body—not counting students who had in-migrated as freshmen.

3. Diversity within student bodies is a recognized value. But if the state exercises some quota formula for out-of-state freshmen, it apparently does not do so for transfer students. The matter deserves further study toward articulation of additional policy.

4. Moreover, the importation of students by private colleges seems particularly acute in view of their tendency to export students to state-supported four-year schools.

C. **Private Colleges**

1. To the extent that they have capacity especially at the upper division level, private colleges can be used to place more transfers and can be encouraged to retain students.

2. This capacity represents an economic asset both to the private colleges and to the state. If it is economical to support students in private colleges, then it is also economical to support transfers and potential transfers in them.

3. The evidence should be apparent, however, to the private colleges. They seem to perpetuate aspects which tend to make them unattractive: costs are hard to bear; transfer credits are not accepted; students come to prefer state institutions; faculties tend to grade more stringently; and transfer students tend to be those who have revised their goals.

D. **Articulation**

1. One of the major objectives of the transfer study entailed a scrutiny of articulation of academic programs, or more generally, the facility with which students are able to transfer. This issue particularly concerned free movement from junior to senior colleges, on the assumption that one pivotal purpose of junior colleges is to prepare students to transfer.

The study did not specifically analyze courses or academic programs, or the complementarity of requirements. But the study did collect several forms of data which lead to an inescapable conclusion: for the most part transferring is readily achieved.

2. The problem seemed to lie in what occurs *after* transfer. Significant numbers of students—in all systems—encountered an increase in the length of time needed to reach the degree. Their previous credits were usually accepted. It appeared, however, that receiving schools simply imposed additional requirements.

It is this situation which requires deeper study and perhaps survey and discussion among registrars and admissions officers, and among those who design programs in senior institutions.

3. On the face of it, however, transferring per se seemed to occur easily. The very magnitude of the "student movement" emphasized this. The great majority of students transferred to schools of their choice. They faced little difficulty in getting credits accepted, and to a great extent they made better grades on average. They were also able to transfer for their own reasons; and junior college students continued studies specifically "to finish a degree." Finally, even students who had decided late on occupational goals tended to transfer readily.

4. In sum, give-and-take seemed to mark the transfer process. That is, schools were generous in most ways, but set time barriers as compensation, and to some extent grade barriers. The overall effect, however, failed to obstruct the migrations.

III. TRANSFER STUDY

1. The Commission plans to formulate, for all levels of post-secondary education, policies regarding a student mix that appears most conducive for Minnesota residents to achieve the goals of higher education within an academic environment which encourages development of individuals and society.

2. The Commission directs its staff to initiate conferences with the state's registrars and admissions officers to explore practices used in establishing program requirements for transfer students as well as compatibility between junior and senior college programs; and to report to the Commission those findings which may indicate problem areas requiring policy formulation by the Commission.

3. The Commission recognizes the need for the college-bound and transfer students to identify occupational goals in order to achieve proper placement within the systems of post-secondary education. Consequently, the Commission urges the broadest possible support for requests which would expand counseling services for the college-bound and transferring students.

4. The Commission plans to explore strategies for minimizing the state's expense arising from students—particularly private college students—who must transfer to state institutions for financial reasons.

5. Aware of the continuing efforts of the community of Minnesota's private colleges to respond to its responsibilities in the state, the Commission directs its staff to initiate conferences with appropriate private college officers to explore pertinent issues identified in the transfer study: availability of private college spaces for transfers, ability of private colleges to attract transfers, financial support for potential transfers, immigration of transfer students, loss of students to state institutions, students' reasons for transferring, and counseling for early identification of students' goals.

6. The Commission urges further in-depth study of the home origins of Minnesota transfer students, of the reasons why students transfer, of compatibility between academic program components, and of policy processes used in determining programs for transfer students.

RECOMMENDATIONS

I. MINNESOTA PROGRAMS IN HIGHER EDUCATION

1. The Commission proposes to formulate a reciprocity policy with neighboring states so as mutually to supply those program areas, especially those presently not available in the state or in bordering regions. For example, first professional programs such as podiatry, optometry, osteopathy, presently not being offered by any institution in Minnesota, could be made available by institutions in neighboring states that have such programs. Many programs at the master's and doctoral levels should also be included in a reciprocity policy statement.

2. The study of regional distribution of educational programs indicates the need for institutions in sparsely populated areas to increase the kinds of programs offered, especially in occupational fields on data processing and public service. Also more health services-paramedical and public service programs should be established in more rural areas. State junior colleges should be encouraged to offer occupational programs where no vocational-technical schools are located.

3. The findings of the curriculum study concerning the comparison of program areas and degrees granted in those areas indicate the need to study the ways of increasing the graduates in baccalaureate programs in private institutions and master's programs in the state colleges. Recommendations will be reported to the 1973 Legislature.

4. The Commission proposes to consider ways in the next biennium to develop a more balanced mix of graduates from master's program in state public institutions. Presently, the glut of education and social science graduates indicates the need for such a study.

5. The curriculum study bears out the need recommended by the 1969 Commission Report to establish state junior colleges in Fairmont, New Ulm, Hutchinson, Alexandria, Cambridge, and Owatonna.

II. REVIEWING NEW EDUCATIONAL PROGRAMS

1. The Commission proposes to review the role and scope of each institution in the total pattern of public post-secondary education during the next biennium. Recommendations on the mission of each of Minne-

sota's public post-secondary institutions and systems will be reported to the 1973 Legislature. The private institutions will be invited to participate in this project.

2. The Commission proposes that the 1971 Legislature provide statutory recognition to the Commission to coordinate the development of all new programs in public post-secondary institutions.

3. In order to plan and coordinate more effectively the educational programs in all post-secondary institutions, both private and public, the Commission proposes that the president of each private institution develop a written policy concerning the role his or her institution will follow pertaining to the program review process of the Commission.

4. The findings of the curriculum study and the experience gained by reviewing new programs indicate a serious need to study in greater depth certain aspects of program duplications and omissions in post-secondary education. Recommendations will be reported to the 1973 Legislature.